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THIS MONTH AND NEXT August is the shooters' month. To those shooters who won the laurels at the Marine Corps Matches at Camp Matthews (see pages 32 and 33), and those who will represent the Corps at the National Matches at Camp Perry, MSgt John DeGrasse has dedicated this month's cover. Part of the editorial content is geared to marksmanship and the ideas our authors have put forth on the subject — including an aviator who gives some thought to a new technique of getting more bomb hits.

As this issue goes to press, the GAZETTE bids farewell to one managing editor, and welcomes another aboard. Capt H. W. Henzel, who has held the billet for some 3½ years, is departing for duty with the 2d Marine Division at Camp Lejeune. His replacement is Maj Clyde B. Shropshire who attended the 1956-57 Junior School, MCEC, MCS, Quantico. Prior to that the new managing editor served with the 1st MarDiv for two years.

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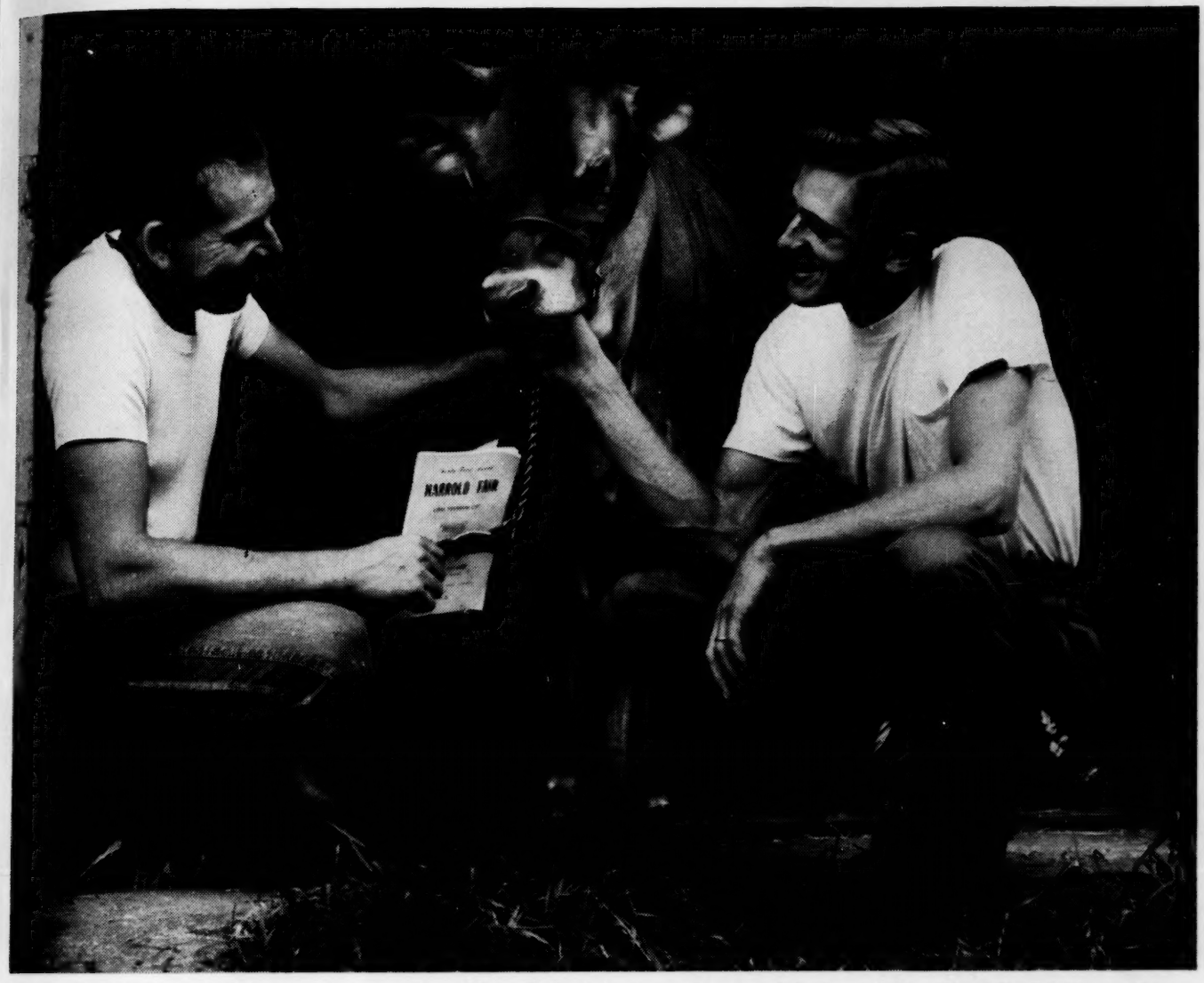

TELEPHONE MAN BOB CROUSHORE, right, stops at farm of John Rathgeb to discuss the entry of this Jersey heifer, Wood-Knoll Stillwater Queen, in livestock show at the Harrold Community Fair, near Greensburg, Pa. Bob is a director of the fair.

PHOTOGRAPHS BY ANSEL ADAMS

Telephone Ambassador-at-Large

He serves his community on and off the job

Tall, rangy Bob Croushore is a mighty familiar figure in Greensburg, Pa. As a telephone man, he gets to meet and talk with people all around town. And that suits Bob right down to the ground because his big interest in life happens to be people.

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Bob Croushore's job and his spare-time activities both revolve around Greensburg's community life. He is a charter member and president of the fire department, a deacon in his church, and a member of the Greensburg Lions Club. And his friends in the farm areas made him a director of the fair.

It seems that the telephone business was partly responsible for bringing Bob and his wife Elizabeth together. Mrs. Croushore, before her marriage, was a telephone operator.

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In my opinion, no collection of professional books for professional Marines would be complete without a copy of that monumental work, *The US Marines and Amphibious War* by Isely and Crowl. Every embryo officer and Staff NCO should cut his teeth on this book, for it presents the background of our specialty better than all other books on this subject combined.

As a convenient way of acquiring a background of military history, may I recommend the new MCI course on General Military History. The text furnished with the course is Lynn Montross' *War Through the Ages,* covering military history from 490 B.C. through WW II. The book is comprehensive, yet interesting and readable, and submission of lessons for the course is optional.

In any discussion of professional books, we inevitably mention biographies. In this connection, I would like to make one point. Military biographies normally have most of their pages devoted to that portion of the subject's life in which he has attained a fairly high rank and is making his contribution to posterity, and rightly so. However, I would like to see the GAZETTE feature a series of articles emphasizing what some of our successful military leaders of today were like when they were on their way to the top, how they distinguished themselves from their contemporaries, what traits of character or talents were responsible for their being among the chosen few selected for high command. For example, in *The Marshall Story* we read of 1st Lt G. C. Marshall amazing his superiors by giving, from hastily scribbled notes and on short notice, a complete operation order for a division. Also, we hear that Mahan was motivated towards his eventual achievements as a scholar and writer when he won runner-up honors in an essay contest. Then too, there's the story of Gen Shepherd who, as a captain, was so engrossed in his work that his wife had to place an alarm clock in his office to remind him to come home for lunch. I feel that a feature of this sort would be well received by your readers.

MAJ R. H. PIEL
Navy #66, FPO, San Francisco, Calif.

Checking Check Points

. . . During a recent field problem, an interesting and perhaps dangerous condition arose from the use of check points.

Camp Lejeune is noted for its lack of elevation—one hill, 50 feet high, and man made. The only identifiable terrain features are road junctions. Consequently all check points are road junctions.

On this particular problem check points were also used as intermediate objectives. This is a perfectly valid practice, but notice the chain of events, the first link of which was a flat, practically featureless area. Road junctions became check points, and subsequently intermediate objectives. Net result—an attack which secured a road net of dubious value considering the intervening terrain was just as flat and nearly as trafficable.

Cerkain key phrases in LtCol Woessner's June 1955 GAZETTE article establish a definite criteria for selecting check points. "Study the terrain" . . . "marked advantage to either combatant" . . . "it is these critical terrain features which are selected and designated as check points." It appears from this that selection of check points is based upon the scheme of maneuver, but certainly they are not the basis for the scheme of maneuver.

This misuse of the check point system is in itself a small thing, but it led to what could be a dangerous situation; i.e., the state of being road bound. Descriptions of similar actual situations make "hairy" reading.

CAPT T. D. PARSONS
2d Mar Div, FMF

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Seagoing Surrebuttal

. . . In my September article in the *Observation Post* I mentioned my impression, as a cruiser Marine Detachment CO, on what might be done to alter the mission of such units. If nothing else were accomplished, thought was at least generated, both pro and con, among many of my peers. I know all of the officers named, either personally or by reputation, and respect their views on the subject. In retrospect, however, I feel that these were the salient points I intended to make:

1) Marine detachments can well do all assigned tasks and have time and manpower available for other efforts. In these days of changing concepts and HQMC's goal of maximum utilization of every Marine any latent talents for potential exploitation must be considered.

2) Although, admittedly, seagoing Marines could not be made into full-fledged recon outfits, they could perform certain limited missions within their capacity, thus assisting both naval and Marine commands concerned.

3) That naval officers have privately stated that the concept of Landing Forces, as traditionally established, should and could be changed from the present "1920-30" approach. Such a change, accomplished on a joint Navy-Marine Corps basis, should prove beneficial to the Naval Service as a whole.

And lastly as Capt Kavakich noted, it may sound like a "frustrated gravel pounder's" lament, but it is also a sincere professional hope that we use all of the Marines who now man our ships in the most efficient manner possible. This will perhaps reduce some frustrations but in a more important sense I feel it is in consonance with other big shifts within the Corps structure aimed at keeping us the most efficient possible fighting team.

CAPT J. R. BRADLEY

Jersey City, NJ

From the Fightermen

. . . Your May '57 cover of the GAZETTE is noted with pleasure.

MSgt John DeGrasse certainly must have spent considerable time observing this squadron to have portrayed its location and operations so well. There remains no doubt as to whom these aircraft belong.

Please allow me to extend my congratulations to yourselves and MSgt DeGrasse for an excellent and appropriate cover. We in Marine Fighter Squadron 323 thank you.

LTCOL D. L. CUMMINGS

MAG 15, El Toro, Calif.

Ground Rules

. . . *Ground rules* are undermining this great Corps of ours. A cause of much trouble—that of uniformity in training. At every post and station in the Corps, there are established ground rules for parades, drill, guard, uniforms, etc., which differ greatly from orders and manuals of the Corps. Let's follow the *book*—at least in peacetime.

CAPT A. C. SMITH, JR.

Quantico, Va.

Unit Rotation

. . . Before the experts start shooting at Capt Richard B. Sheridan's *Rotate by Battalions*, let at least one other "non-expert" second the motion.

Rotation on a battalion basis seems more feasible from the standpoints of operational readiness, logistical economy, and that intangible quality we call "esprit de corps."

The general idea is, of course, not new, but Capt Sheridan's treatment of it is one of the most comprehensive I've heard to date. A lot of headaches would result for the Personnel Branch, at least initially, but no worse than those suffered by the company commander who is faced with a large rotation draft a week or so before the division maneuver.

MAJ R. M. HEAD

San Francisco, Calif.

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Soviet View

. . . The article *Must Our Cities Be Battlefields?* by Dr. Edgar A. Parsons in the May GAZETTE is a real thought provoker, but I wonder if it faces up realistically to the Soviet principles of war?

These are given by Mr. Walter Darnell Jacobs, writing in the December 1956 edition of *Military Review* as:

1) The stability of the rear
2) The morale of the army and the homefront
3) The number and quality of divisions
4) The equipment of the army
5) The quality and capability of the command personnel.

The article goes on to mention that Marshal Voroshilov has suggested the addition to the above list of the matter of adequate reserves.

LTCOL G. L. MCKEE, USA
Ft Knox, Ky.

Atomic Alternatives

. . . *Must Our Cities Be Battlefields,* by Edgar A. Parsons, appearing in the May issue of the GAZETTE presented a thought-provoking concept for eliminating the inevitable destruction of our cities, which in present military thinking has become embedded as a necesary corollary of the so-called "all out" atomic war. However, the idea of a mobile Navy, able to operate for sustained periods independent of fixed bases, and capable of retaliation in the event of atomic attack upon the United States is a working concept at the present time. In fact it was the basis of Adm Carney's statement to Congress as long ago as 1955, in support of the Navy's carrier program. Removing this theory from Dr. Parsons' article, it becomes apparent that his concept is based upon the premise that 'lead time' as he calls it, or in other words the time necessary to manufacture modern weapons in operational quantities, will render industrial targets unattractive. He arrives at this premise on the apparent theory the military supplies for modern war must be stock-piled ahead of time, and those not manufactured at the beginning of a war will not be manufactured in time to be in use by the end of the war. Therefore, targets attractive to the enemy will be armed forces and stock-piled military supplies.

This is a most interesting concept, however, it cannot be denied that the real strength of the United States in the area of world strategy, is its productive capacity. Granted it takes years to move a new model aircraft from drawing board to operational squadrons, and it takes years to build super-carriers, and other complicated weapons systems. It does not take years to produce tanks, bullets and the myriad of stores and supplies that keep an army operating in the field. It was the ability of the United States to replace and replenish this vast quantity of supplies that defeated the Japanese, and it was the inability to replenish such supplies, due to reduced industrial capacity and interdicted supply lines that defeated Germany. Industrial potential was an important factor in the contest between North and South in the Civil War, and it cannot be lightly brushed aside today, when capacity to wage war is often spoken of in terms of "gross national product."

It is indeed an attractive idea to wage war over the expanse of deserted seas, thus sparing our cities, but it hardly seems likely that a rational enemy would overlook an opportunity to weaken our all important industrial potential. Accordingly, it would be foolhardy to remove what defenses we have from industrial areas, in the hope that the enemy would then not attack them. On the contrary, it would only facilitate such an attack.

According to the article, we could declare some of our cities to be "open cities," and spare them in this manner. This also appears attractive, but what city today is not so integrated in the industrial framework, housing such things as factories, office buildings, stock exchanges, warehouses, ports and transportation facilities, that it could be declared not a part of our business industrial organization and hence not a part of our productive potential?

What we really must consider perhaps, is not trying to fight a full scale war on limited battlefields, but rather, if there is to be war, fighting a *limited war* on limited battlefields. Korea provides an excellent example of limited war, in which each side observed certain restrictions in order to gain the mutual benefit of presenting wholesale destruction. Perhaps more attention should be devoted to the concept of limited wars, and the tactics necessary to win them. It may be that humanity will not destroy itself, prophets to the contrary notwithstanding, and that limited wars will decide the pattern of history.

CAPT W. L. OTTEN, JR.
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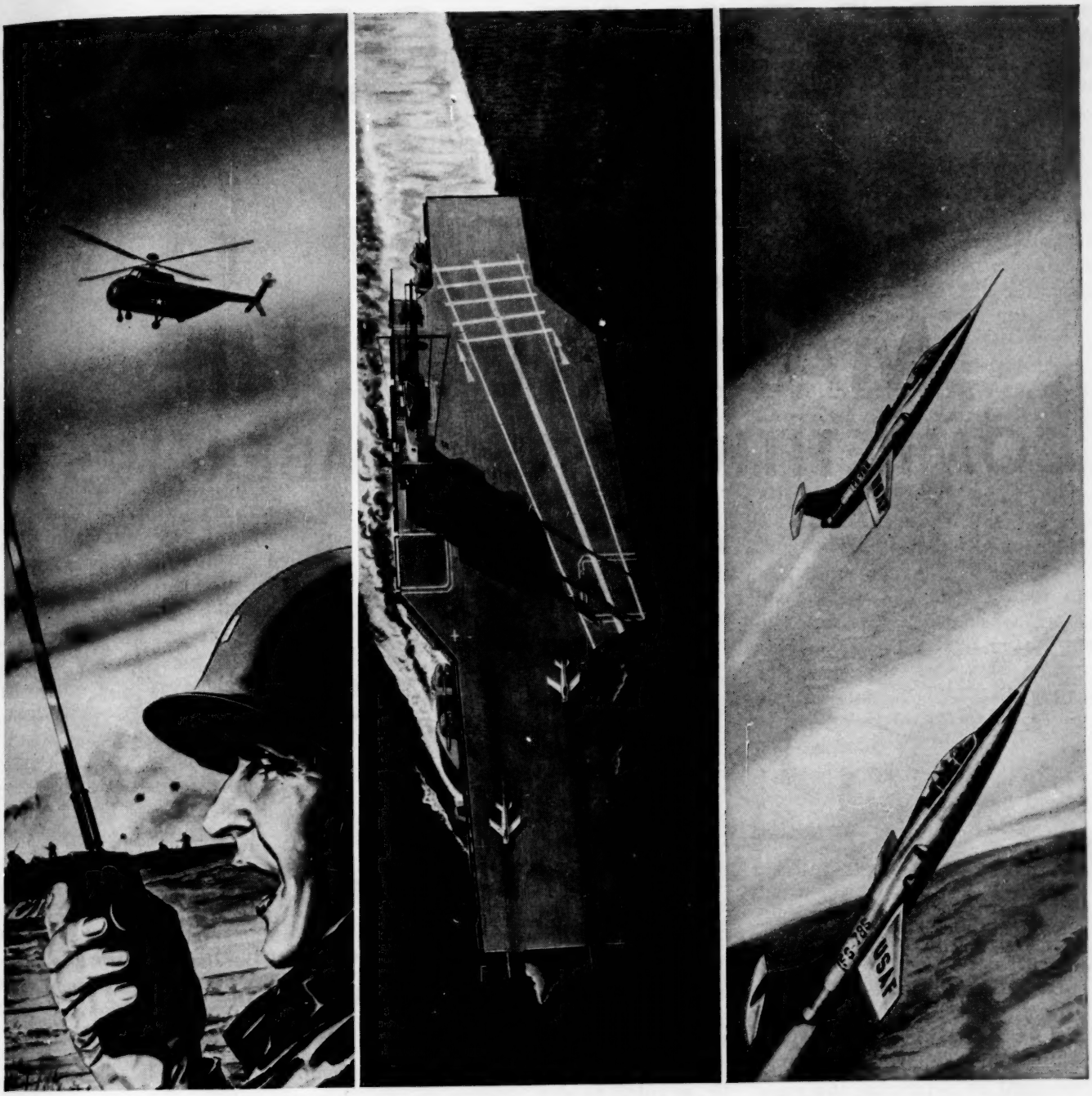

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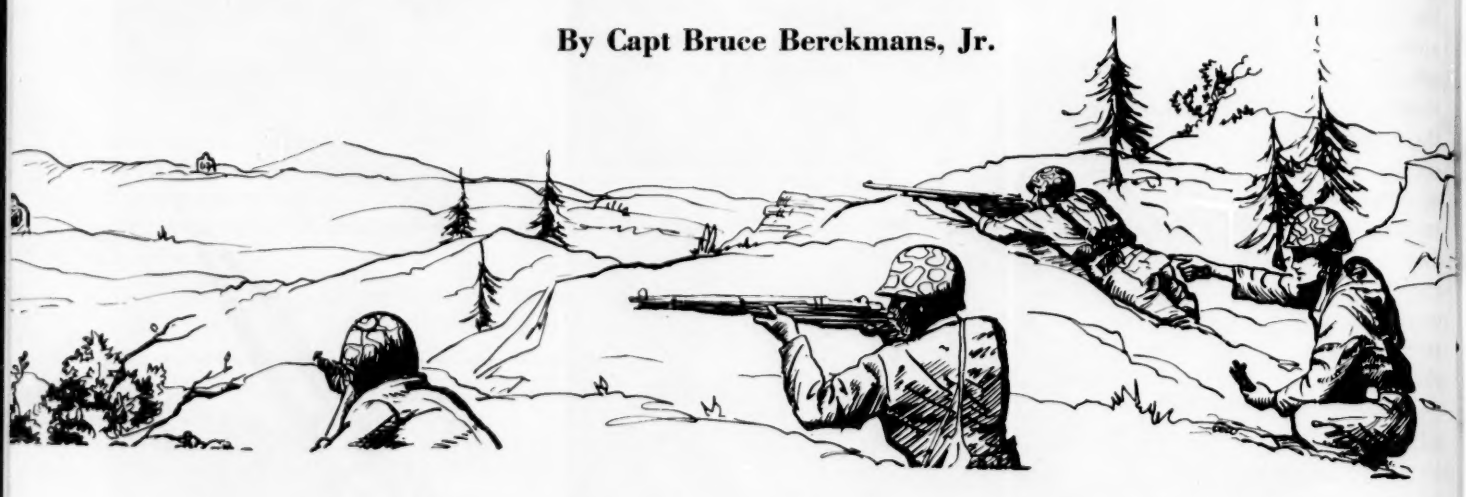
MARINE CORPS UNIT COMBAT MARKSMANSHIP COMPETITION—SEPTEMBER 1957

By Capt Bruce Berckmans, Jr.



A program in which *every* Marine can participate rewards not only the individual and his team, but increases the overall combat readiness of the Corps

THE MARINE CORPS UNIT Marksmanship Competition — 1957 is designed to determine the regularly constituted Marine rifle squad most proficient in combat marksmanship and in the technique of offensive combat. It was established on 1 February 1957 by the Commandant after more than 2 years of study, planning and development by the G3 Section, Headquarters Marine Corps and the Test and Development Section of the Training and Test Regiment at Quantico. The new electronic target devices, scorers and simulators which will be used during the competition were produced by the Special Devices Center of the Office of Naval Research. The competition, which is planned as an annual event, will be held at Marine Corps Schools, Quantico during the week of 9-13 September for its initial running this year. Medals will be awarded to each Marine in the first, second and third place squads.

One squad will be selected by each regiment in the Marine Corps to represent it in the competition. The squad will be a regularly constituted one, drawn from one of the rifle platoons. The Commandant has published to the various interested commands a training test and "strongly recommends" that it be used to determine the representative squad. Provision has been made for each squad to have available one additional fire team from which replacement personnel may be drawn in the event that Marines of the original squad are absent. The selected squads will report to Quantico in time to be thoroughly briefed on the general nature of the final competition, as well as the rules, scoring system and safety regulations to be observed on the range.

The range on which the competition is to be run has been selected on the basis of the suitability of terrain for squad-size problems, good observation for personnel directing and scoring the competition, and the availability of a power source for the operation of the target devices and simulators. A control tower has been built from which the entire range is clearly visible and it is from here that the targets and simulators will be controlled and all scoring of hits on the targets will be done. Underground ducts for the control and power cables leading to the various devices on the range are located on the approximate center line, and

will be completely out of the way of the competing squads. The location of these ducts, together with the lead-in cables from the target devices, provides for wide flexibility in setting up future problems. An assembly area is located to the rear of the baseline of the range, and the competing squads will wait here, out of sight of the range, until it is their turn to run the course. This will afford no particular squad an advantage through having observed previous squads. There are also bleachers from which spectators will have a clear view of the entire range.

A great deal of realism will be added to the problem by the simulators developed for the competition by the Special Devices Center. One type, a ground fire simulator used to represent either rifle or machine gun fire, operates by means of a spark plug which ignites a mixture of acetylene and oxygen to produce a realistic flash and bang. Another, an overhead artillery simulator, is of the pyrotechnic type, but electrically detonated. It explodes overhead, in the manner of "VT" rounds and furnishes a greater effect than an equal amount of explosive detonated on the ground. It is also safer, since the competing troops have no opportunity of stepping on it, and since it is emplaced well off the range, there is no need for the familiar white engineer tape to appear on the "battlefield."

The competition itself will consist of several phases. Initially, each squad will be issued one unit of fire per man and briefed on the general situation on which their problem is based. Next, after advancing towards the base line of the range they will become tactical and be issued an order by an umpire representing the platoon leader. From this point on an umpire-and-scorer will accompany each fire team, and one will observe the actions of the squad leader and his squad as a whole. Advancing his squad onto the range, the squad leader will be faced with a series of realistic combat situations during which enemy troops will fire on his squad, appear and disappear, "bug out," reform and defend again, and again — if the squad is aggressive enough — "bug out" again. The squad leader and his squad will be judged on the quality of their individual and unit conduct, including orders, formations, fire control and accuracy, fire and maneuver, assault and reorganization, and their assumption of hasty defense. The hits on targets will be scored electronically on counters in the control tower, and the other factors will be judged by the umpire-scorers who accompany each unit.

To further the realism, competitors will wear utilities with boots, helmets, light marching packs and cartridge belts, protective body armor, and carry normal arms and magazines. Weapons will be zeroed prior to arrival at Quantico, and Marines will have no opportunity to study the range prior to competing on it. Once the competing squad begins its problem, there will be no interruptions for scoring, changing of targets, or other administrative or control details. Firing will cease only on completion of the problem or in the event of some unforeseen emergency which makes the range unsafe.

In addition to being realistic, the Unit Combat Marksmanship Competition will also be safe — for both competitors and range personnel, as well as for spectators. The wide right and left limiting points will be clearly marked on each side of the range, and range guards will be provided to keep all personnel out of danger areas. These range guards will be in contact with the control tower by both radio and field telephone. The Range Officer will be located in the control tower which commands a clear view of the entire range and surrounding area. A sound system will be installed on the range whenever it is used so that firing may be ordered ceased at any time. This precaution will be augmented by the use of smoke streamer rifle grenades in the event the sound system is unheard or inoperative. All personnel on the range will wear helmets during live firing, and range personnel will wear red helmets to provide for easy identification from the tower. The umpire-scorers will have radio communication with the control tower, and will also carry whistles and red smoke grenades as added signaling devices. Perhaps the most significant safety feature is the absence of any personnel on the range to act as target details or "butts scorers." This has been made possible by the electronic target and scoring devices.

It is anticipated that the Unit Combat Marksmanship Competition will be of benefit to both the training and esprit of every infantryman in the Marine Corps. Each of the rifle squads in the infantry regiment will have an opportunity to compete. Some will be good enough to represent their company, some will reach the regimental finals, and finally the best 9 squads will compete at Quantico. All of these squads, however, will have accomplished one thing in common — they will have completed valuable training of an interesting and realistic kind. The winning squads, in addition will have achieved a distinction of which they can be justly proud. The medals awarded the Marines of the top 3 squads will become a permanent part of the uniform, to be worn in the same manner as our present marksmanship badges.

There is another, additional advantage which the competition will provide. Heretofore, the average Marine has usually considered the successful competitive shooter as belonging to a "breed apart." The potentially successful combat shooter has had little opportunity either to receive training in combat firing or to demonstrate his particular skill in competition. Now, in addition to the annual competition in arms program, the Marines of every rifle squad in the Corps will have an opportunity to measure themselves against the ultimate yardstick of both the individual infantryman and the infantry unit — effectiveness with weapons in combat. USMC

POINT BLANK

By LtCol J. F. Bolt **for je**

ground and in

JET FIGHTER BOMBER AIRCRAFT can greatly improve their accuracy by using a method of bombing devised in Korea in the winter and spring of 1952-53. This new tactic, referred to as Point Blank Bombing, has no new or unfamiliar elements in it. It is a new application of several familiar elements into a new and strikingly effective tactic. The object of the theory is to permit closing the release range in bombing with jet fighters. It is a low altitude high-angle release made possible through the use of a delayed action fuze. At worst, it amounts to the wrong fuze for a target. It is money-back guaranteed to give a much greater hit probability. It is the old advice of—"don't fire until you see the white of their eyes"—brought up to date for jet tactics.

The jet fighter bomber is easier to control in a dive than is a reciprocator plane. The jet has no torque effect that skids and rolls it off the desired flight path. The jet has powered flight controls that permit much better control in the dive. Yet despite this, the jet doesn't get any more hits in dive or glide bombing than does the reciprocator planes—for several reasons.

Radius of turn or dive recovery for any given "G" (centrifugal force measured in multiples of the force of gravity) is directly proportionate to the square of the speed. Therefore, the jet fighter bomber recovering at a true air speed (TAS) of 480 knots will have approximately 4 times the recovery distance that an SBD dive bomber had when recovering at 240 knots TAS, for the same angle of dive. Figure 1 illustrates this point. Both aircraft are level at 2,000 feet, but it was necessary for the F9F to release at 3,200 feet, whereas the SBD released at 2,400 feet. The 45 degree dive is a compromise between the normal dive angle for each aircraft. The SBD type aircraft would normally dive at 70 degrees. Therefore, with the above considerations in mind, the jet must release its bomb at a higher altitude than slower aircraft because of the increased recovery altitude for the same angle of dive. For a given release altitude, shallow angle dives, 45 degrees and less, are less accurate than steep angle dives. This is true because the bomb has greater linear distance to travel. The wind force is applied for a longer period. The gravitational force is more opposed to the line of sight to the target.

The jet fighter bomber is plagued by a very high ratio of bomb blast inflicted damage. This bomb damage is in fact much higher than statistics indicate, because questionable cases are always reported as flak damage. Sometimes unquestionable cases of self-inflicted bomb damage are listed as flak damage. Why? Well, a pilot is a hero if the enemy shoots him up. COs and Operations Officers reflect heroism like mirrors do light. The dirt of a bum can rub off on his superiors too, so, when there is doubt it's flak damage. Doubt, you know, is a state of mind.

The jet FB actually does suffer more in respect to bomb blast than did the accurate dive bombers of WW II, for several reasons. The jet fighter bomber, compelled to compromise the above mentioned forces of speed and radius of turn, normally uses the 30 to 40 degree dive in bombing. This angle, with the high

BOMBING

speed of the jet, has an attendant hazard from increased bomb blast damage. Although generally described as blast damage, the blast wave from the bomb is no hazard when compared to the bomb fragments. The fragment pattern about a bomb is uneven. The pattern is denser perpendicular to the longitudinal axis of the bomb. The bomb is oblong and there is many times more casing about the longitudinal axis than there is about the lateral axis. An object in this high density fragment area will be hit by many times more fragments than will the same sized object in the low density fragment areas. Using the 70-degree dive for the SBD at 240 knots and a 30-degree dive at 480 knots for the F9F, Figure 2 plots the relative position of the dive bomber and the jet fighter bomber in relation to their angle from the longitudinal axis of their own bombs at the instant of impact. It can be seen that the jet with its high speed and wide radius of turn cannot keep out of the high density fragment area off the side of the bomb, where as the slow dive bomber with the short radius of turn is more in the low density area off the tail of the bomb. For the same minimum altitude, the jet will be hit many times more frequently than the older dive bomber. In order to keep self-inflicted damage within reason, the Fifth Air Force, in operational control of the 1st Marine Air Wing, and the Seventh Fleet operating off Korea, both advised using a minimum altitude some 50 per cent higher for jets than had been practiced with WW II aircraft.

An increase of 50 per cent in the release altiude means a decrease of considerably more than 50 per cent in accuracy. To get hits on any target, all that needs to be done is to reduce the range. Skip bombing is a method of bombing that reduces the range to a minimum. In skip bombing, the bomb is released at low altitudes and short ranges and the ricochet or skip is used to place the bomb. Skip bombing is usually employed against ships at sea, tunnel mouths or hillside positions. It is highly accurate, but it is limited to targets that are large enough to hit consistently and substantial enough to retain the bomb. The ricochet of the bomb is very unpredictable and therein lies the weakness of skip bombing. Ricochet tables for bombs have been plotted and published. These tables show that bombs can be expected to do about anything when dropped at low angles. When two bombs are dropped in pairs at low angles to the ground, one bomb might stick where it hit and the other might bounce 500 feet into the air and travel over a mile. The striking inertia of bombs released from jets is tremendous. Dropping the bomb into the supports of bridges will usually mean that the bomb will carry through the supporting members, if they are wood, or the bomb case will rupture, if the bridge supports are concrete. In skip bombing it is necessary to use a delayed action fuze on the bomb. This is so because the aircraft is actually very close to the bomb when the bomb hits the earth or target. The delay on the fuze then permits the aircraft to continue on to a safe distance beyond the bomb before the bomb explodes.

Point Blank Bombing permits using a range comparable to skip bombing, but it avoids the ricochet

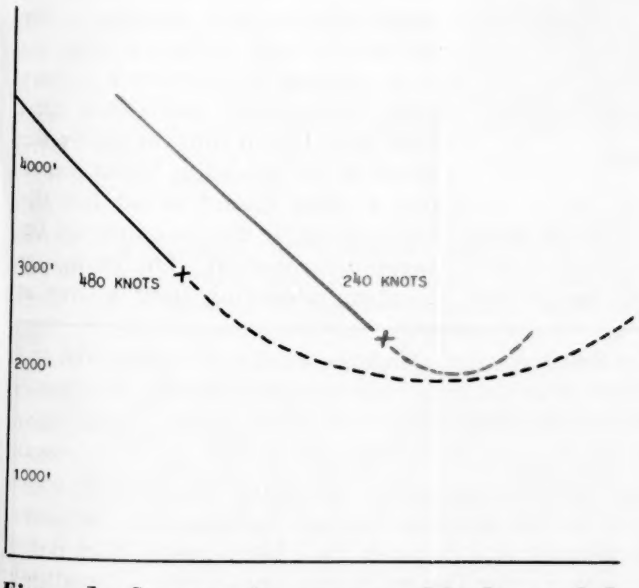


Figure 1: Comparative recovery altitudes needed at different speeds for 45-degree dive and 5G pull out

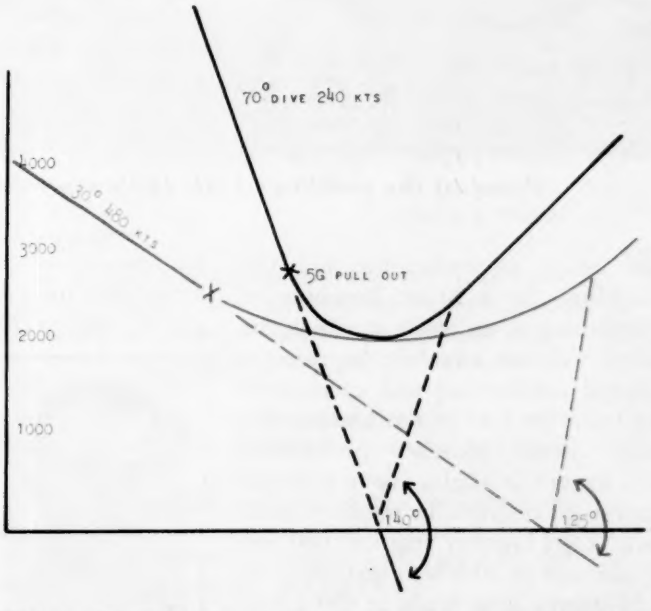


Figure 2: Relative angle of aircraft to longitudinal axis of its own bomb at instant of bomb's impact

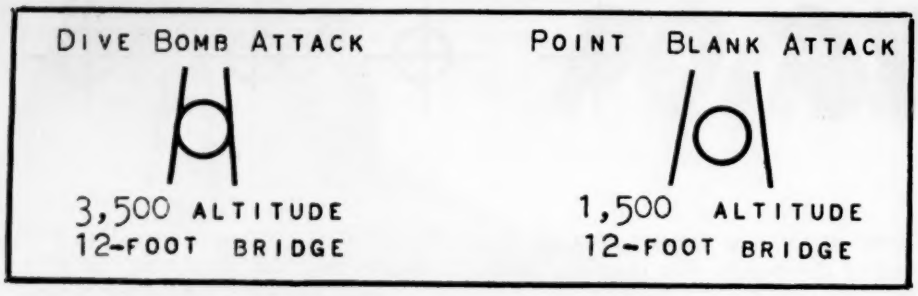
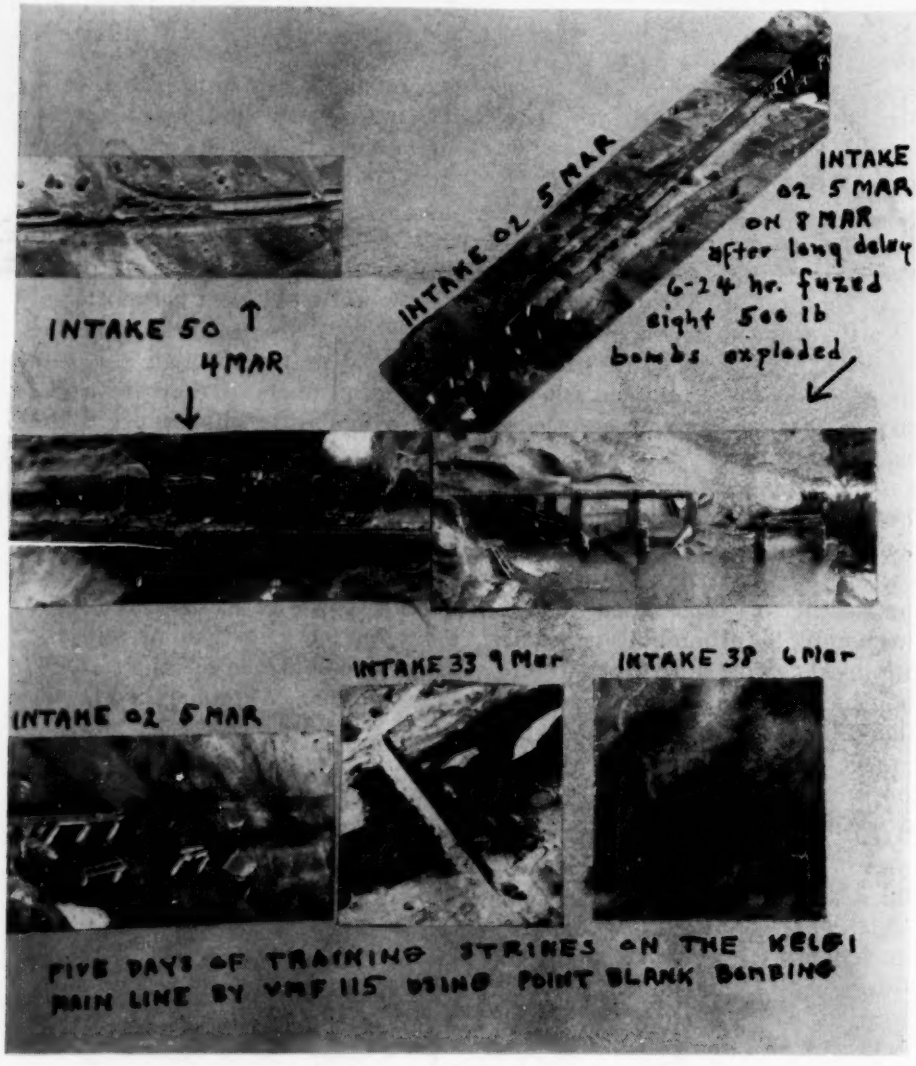


Figure 3: Pilot's view of bridge through his mil sight pip


INTAKE 02 5 MAR
INTAKE 02 5 MAR ON 8 MAR after long delay 6-24 hr. fuzed eight 500 lb bombs exploded
INTAKE 50 ↑ 4 MAR
INTAKE 33 9 Mar
INTAKE 38 6 Mar
INTAME 02 5 MAR
FIVE DAYS OF TRAINING STRIKES ON THE KELGI MAIN LINE BY VMF 115 USING POINT BLANK BOMBING

Proof of the pudding: VMF 115's score in Korea

that is so unpredictable in skip bombing. Point Blank Bombing is: a) bombing at an angle at which the bomb will not ricochet, b) using a delayed action fuze and c) recovering from the dive at a minimum altitude. Bomb ricochet probability falls to zero at angles above approximately 25 degrees, in medium hard soil. A jet bomber requires 600 feet of altitude in which to recover from a 35 degree dive made at 400 knots. To make certain the pilot doesn't misjudge his release altitude and not recover in time to keep from flying into the ground, a safety margin of 100 or 200 per cent is normally used in the release altitude for Point Blank Bombing. Compare this release altitude of 1,500 feet in the above case, which includes the 150 per cent safety margin, to the conventional bombing release altitude of 3,500 to 4,000 feet. Compare these release altitudes, but this is not the comparative accuracy of the two types of bombing. The Operations Evaluation Group, Office of the CNO, states that accuracy improves by 2 to 4 times when the range is halved.

Point Blank Bombing is certainly no cure-all. It has some serious limitations. Other features, which at first appear to be limitations, turn out to be no more than handicaps that can be avoided by proper use of the system. The most severe limitation of Point Blank Bombing is that it is restricted to using the bomb for demolition or blast effect and cannot make use of the bomb fragmentation effect. In attacks against exposed vehicles or troops, the fragmentation effect of a bomb is of far more importance than the blast effect. Fragmentation effect can best be used by employing an instantaneous or proximity fuze. The fighter bombers are able to cover for this deficiency when fuzed for Point Blank Bombing in that they all carry four 20mm guns which are very effective against exposed targets. Of course, the 20mm gun has an accuracy that far exceeds that of bombing, Point Blank or otherwise.

Five-second delay fuzes are suitable for the Point Blank Bombing tactic. The tactical difficulty in the use of this type of fuze is that the time interval in the attack is very great. Fragments and debris that have been blown into the air by the bomb of the preceding plane constitute a great hazard to all but the first aircraft, if the time interval between dives is short. The jet fighter bomber, recovering from a dive at

LtCol Bolt has a distinguished record as a fighter pilot in both propeller driven aircraft and jets. Starting with Boyington's Blacksheep (VMF 214) in the Solomons, and later with Marine Carrier Air Group 7, he has served in most every major aviation unit in the Corps. In Korea he was with VMF 115, and as an Air Force exchange pilot, became the Marine Corps' first jet ace. After Korea LtCol Bolt was with Fighter Design, BuAer, until 1956. Thereafter he attended Senior School, MCS and is now with the 1st Marine Brigade.

420 knots, is moving at 700 feet per second. A piece of blast debris with even zero velocity will have considerable impact force if the fast moving aircraft strikes it. To be safe from this debris danger in a Point Blank Bombing attack, an interval of about 20 seconds between aircraft is necessary in the attack. This long interval permits antiaircraft gunners to concentrate their fire on each separate aircraft during its attack. If a delay on the fuze in excess of 5 minutes is used, the attack can be made with very little interval between planes in the dive. By using a fuze with this long delay, i.e., 5 minutes or more, the attack by all planes is made before any bombs explode. Then there is no debris or bomb fragment danger and target obscuration by smoke is eliminated. Target obscuration by smoke has always been a serious problem in bombing. With the general advent of the tritonal bomb explosive, target obscuration has become greater due to more smoke being generated by this explosive. It is safe to say that in an attack on a small target by several divisions of fighter bombers, normally, only the first two aircraft have the target in sight on their release. The smoke from the first bombs quickly obscures the target, making it impossible for the succeeding pilots to do anything but bomb the smoke area. As the smoke area enlarges and shifts with the wind, accurate bombing becomes futile. Use of long delay fuzes, in excess of the time required for the attack, gives the last aircraft a target picture as clear as the first aircraft has.

Some features which at first appear to be objectionable in Point Blank Bombing, and which might be worth mentioning, are these: Does the delay fuze cause the bomb to be smothered in its cratering effect? Does the delay fuze permit the bomb case to rupture and the explosive contents to burn rather than explode? The answer to both of these questions is "no." The jet dive bomber, releasing in normal conditions, cannot cause a medium or large general purpose bomb to penetrate the earth so far that its maximum cratering depth is exceeded. The vertical striking velocity of a fighter bomber's bomb will never approach the vertical velocity of bombs from medium or high altitude horizontal bombers. All bombs dropped from low altitude, high angles have come to a complete rest within a small fraction of a second. If the bomb case is going to rupture and the explosive deflagrate (burn), it will occur with any fuze selected for maximum crater effect. Hence, if a short delay fuzed bomb doesn't deflagrate, as opposed to an instantaneous fuzed bomb, neither will a longer delay fuzed bomb deflagrate.

Point Blank Bombing should be limited to targets where a subsurface burst is desired. Targets such as trenches, field fortifications, bridge piers and abutments, road and rail cuts, can be more efficiently destroyed if it is used. It is not suitable if a surface or above surface bomb burst is desired. The explosive force of a bomb is inversely proportional to the square of the distance from the bomb. This tactic can improve your accuracy by 200 to 400 per cent. It does more for your effectiveness.

Point Blank Bombing was used extensively by Marine Air Group 33 in Korea from about March of 1953 until the cease fire in July of 1953. It was extremely popular with both pilots and with the forward air controllers. At the range at which the bomb has normally been released, the fighter bomber pilot using Point Blank Bombing is still seeing more and more of the target and still making corrections in his bombing dive. Point Blank Bombing is a good system. It was born in combat. It has been combat tested and combat proven. Let's not forget it in peacetime when we can be practicing and improving it. USMC

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No, Not Yet

A NEWLY COMMISSIONED second lieutenant had reported to the Basic School, Philadelphia, in August 1937 and stood before Capt Lewis B. Puller who was personally checking on the progress of the purchase and fit of the new officer's uniforms. Capt Puller said, "Lieutenant, have you gotten your khakis yet?" The lieutenant, unaccustomed to the broad "a" in khaki and in Capt Puller's characteristic pronunciation (which sounded something like "carkeys"), hesitantly replied, "No Sir, Captain, I don't even have a car yet!"

Col J. L. Stewart

Rough in the Field

DURING THE WINTER OF 1939, the executive officer of MBNY, Washington, DC was very strict about the morning physical drill being held outside. No platoon sergeant ever dared to take advantage of the clause in the barracks order that stated that in the event of inclement weather, the exercise could be held inside the barracks by the bunks. As a result, we fell out in ponchos in rain and cancellation of exercise was unheard of.

However, one windy winter morning, after a night of snow, rain and sleet which formed a 2-inch layer of ice, with footing dangerous, the platoon sergeant declared the weather inclement, and held physical drill inside the barracks.

At office hours, the executive officer sent for the platoon sergeant and stated that evidently he needed instruction in the definition of inclement weather.

Taking the morning newspaper he said: "This is my idea of inclement weather," showing him the headline which read: FINNS FIGHT RUSSIANS IN 60° BELOW ZERO WEATHER.

1st Sgt J. W. Arnett

(The GAZETTE *will pay $10.00 for each anecdote published. Submissions should be short and pointed.)*

MR. VINSON SPEAKS...

Defense Organization

Organization of the national military establishment has been the subject of controversy and public discussion in this country since the founding fathers met in Constitutional Convention.

Many theories and concepts have been advanced at various stages in the nation's history. Recently, an old, often rejected, theory has been revived and advanced in many quarters with a new argument that it will result in greater economy in the operation of the Department of Defense. This theory rests upon the proposition that a greater centralization of authority, brought about by a merger of the military services under one chief of staff with all wearing the same uniform, will produce a more effective defense of the country at less cost.

The tremendous impact that adoption of such a theory would have upon our Military Services is obvious.

The following speech by the Honorable Carl Vinson on the Floor of the House of Representatives presents the thoughts of a Member of Congress who is recognized by many as the best qualified, by virtue of experience and knowledge of defense matters, to speak on this subject.

The Honorable Carl Vinson has long since earned, and richly deserves, the title "Statesman." His career in public service spans over 50 years, of which over 42 years have been in the US Congress.

His interest in the organization, operation and combat effectiveness of the nation's Armed Services has been intense during his entire career in the Congress. His devoted attention to the strength and combat readiness of all branches of the Armed Services has prompted him to sponsor countless legislative proposals that have bolstered our military readiness and improved the military profession.

Chairman Vinson's profound knowledge and understanding of the problems inherent in planning and building the nation's defenses for the atomic era were molded during a span of over 25 years of intimate association with those problems as chairman or member of the Naval Affairs and the Armed Services Committees.

He became Chairman of the Naval Affairs Committee in 1932. His long tenure in this position has resulted in his being addressed, both directly and indirectly, as "the Admiral." He could just as appropriately be called "the General" in view of his interest in and broad knowledge of the Army, Air Force and Marine Corps through his Chairmanship of the Armed Services Committee.

As Chairman of the House Armed Services Committee he is a leading student and exponent of the balanced force concept of national defense. It is largely through his leadership that our nation possesses a balanced force today; a force designed to provide a versatile and flexible means to meet aggression, whether it be in the form of a small border war or an all out atomic conflict. The balanced fleet, a unique contribution to our nation's defenses, was created and exploited largely as a direct result of Mr. Vinson's efforts. Consisting not only of the usual combatant vessels, the balanced fleet includes the powerful carrier task forces and Marine landing forces. It has provided the unsurpassed global mobility and strategic flexibility that may well prove the key to victory in any future conflict as it was in WWII and Korea.

Mr. Vinson has repeatedly opposed the adoption of a single chief of staff/general staff system as a centralization of power foreign to our way of life and dangerous to our national security. His skillful and intelligent opposition to repeated moves in this direction has made him an honored and respected leader of those who believe in protecting and preserving the Constitution and its basic principle of civilian control of the military.

The advocates of the single service/single chief of staff concept have advanced economy as a new and overriding reason for adoption of their theories. In his speech, set forth in part below, Mr. Vinson answers this argument with a devastating logic based upon experience that is unmatched in public life today.

MR. CHAIRMAN, IN THE FACE OF INFORMATION WHICH was available to the Committee on Appropriations; in the face of statements which were made last year and again this year; in the face of the forecasts that the appropriations for our defense this year would exceed those that were appropriated last year, I, for one, must at least raise the question as to whether these cuts are justified; and I for one will not support one additional penny reduction in the bill now before this House.

Let none of us be lulled into the complacency the Appropriations Committee warned about. I am confident in my own mind that the reductions that are contained in this bill may have to be made up by supplemental appropriations in the months ahead.

I would be remiss in my duties as a Member of this House if I did not caution the House that in my opinion this is a rockbottom bill as it now stands and it cannot be further reduced without jeopardizing our national security.

Any further reductions will have to be felt in reduced

procurement, extended lead time and reduced research. We can talk until we are blue in the face about duplication, but bear in mind that we have all the same objective in mind — the defense of the nation. And I, for one, will not subscribe to the theory that interservice rivalry is jeopardizing our national security. Each Service is seeking to perfect the weapons necessary to accomplish its assigned mission. So long as those missions remain unchanged, it is not only incumbent upon, but absolutely essential, that each Service perfect the weapons that will permit them to gain the weapons supremacy necessary in their field of endeavor.

Many questions have been raised by Members of Congress and others as to why it is necessary for us to maintain a stable force of approximately 2,800,000 men in our Armed Forces for the years ahead, particularly when we are approaching an era of guided missiles and so-called pushbutton warfare.

Mr. Chairman, this nation, whether we like it or not, must be prepared to fight not only an atomic war with all of its horrors, but also a conventional war that likewise is horrible to contemplate, but at least does not threaten world extinction.

Not only must we be ready to fight two types of war, but we must be ready to fight on the land, on the sea, under the sea, in the air and in the stratosphere. Our main line of resistance does not begin at the end of the 12-mile limit; our main line of resistance is to be found in Germany, Italy, Turkey, Greece, Korea, Formosa, Indo-China, the Philippines and every place in the world where free governments exist.

Our international commitments require manpower. These commitments are not based upon pure altruism — they are based upon the necessary strategy which will assure our victory if another world war should occur — be it atomic or non-atomic in nature.

The price of freedom is high, but the cost of defeat is beyond description.

Mr. Chairman, I have tremendous respect for the gentleman from Texas [Mr. Mahon], and I realize how difficult and complicated a defense appropriation bill must necessarily be. And while I might differ with the gentleman from Texas in some of his conclusions, nevertheless, I would like to take this opportunity to congratulate him upon his masterful presentation of this defense budget. But there is one statement which the gentleman from Texas made that cannot go unchallenged and I refer to that part of his statement of last Friday when he said: "A part of the answer is a greater degree of unification instead of tension and disunity, something approaching a merger."

This statement concerns me greatly.

There is no Member of this Congress more interested in economy than I. All of us would like to see Government expenditures and the national debt reduced, and taxes decreased.

But I sincerely trust that the vast majority of this House will resist all efforts to bring about specious savings through the merger of our armed services, under one chief of staff, all wearing one uniform.

There seems to be a tendency on the part of some to adopt the wishful theory that more centralization of

The Honorable Carl Vinson

power brings about savings. Nothing could be further from the truth.

In 1947 the Congress approved the National Security Act which created the Office of the Secretary of Defense and the Department of Defense, but at the same time created a separate Air Force. I thought then, and I continue to think that that decision was a wise one.

We created a board of directors when we created the Office of the Secretary of Defense, but we also wisely acknowledged the permanent establishment of a separate military organization known as the Air Force because its roles and missions had attained a position in our defense structure which not only required but demanded its separate administration.

Today we have 3 separate military departments, separately administered, but under the direction, authority, and control of the Secretary of Defense. But the same law that grants this authority specifically states that our military departments shall not be merged.

We will hear for years to come many well-meaning persons strongly advance the argument that billions in potential savings can be effected through a complete merger of our Armed Services.

Should we ever be so foolish as to succumb to this illusion we will have jeopardized the security of this nation to such an extent that our continuation as a free Nation would be extremely doubtful.

We have made great strides in unification as evidenced by the single service procurement system, the recent adoption of the single manager system, and the identification phase of the Federal catalog program. According to a recent report of the Secretary of Defense, a total of 2,750,000 items have been identified,

of approximately 90 per cent of the more than 3 million separate items estimated to be in the military supply system as of 30 June 1956. Further progress has been made in the identification program based upon the work already accomplished in the catalog program.

According to the report of the Secretary of Defense, since the beginning of the identification program, more than 437,000 items have been eliminated.

In evaluating recent criticism of the Defense Department with respect to the fiscal year 1958 budget and the necessarily large outlays of funds for procurement, critics would have us believe there is extensive duplication of buying by the military Services. Here are a few facts which clearly demonstrate the notable extent of unification of the Armed Services in the procurement and supply fields.

There are two principal management systems used to implement centralized procurement within the Department of Defense – the single-manager program and the single-procurement assignment program.

In the single-manager program the Secretary of one military department is responsible for all Department of Defense supply management functions for a designated class of commodities, or services, from research and development through procurement, stock control, financial management, distribution, issue and disposal. This system establishes a single wholesale stock of the commodities for all military uses, centrally controlled by the single manager. It eliminates duplicate pipelines and storage, minimizes cross-handling and promotes effective utilization of stocks, services and facilities.

Defense procurement for materiel and supplies is currently running at the rate of about $15 billion annually. Of this amount, approximately $2.5 billion or 17 per cent represents the portion procured under the single managers. These commodities include petroleum products, subsistence, clothing and textiles and medical material. There is no duplication here.

In the single procurement assignment program one of the military departments, through its normal procurement system, purchases all of a given class of commodities for itself and the other Services in accordance with their requirements. This program covers about one-half of all Department of Defense purchases of materiel and supplies. Exceptions are made for local procurement and certain equipment of special design...

Still another significant refutation of charges of duplication is found in the Defense Interservice Supply Support Program—a relatively new but vitally important phase of military supply management which assures the interdepartmental utilization of over-all Defense supply assets before new procurement is undertaken, and which prevents the disposal of items for which any requirement exists...

In this connection, it should not be assumed that complete centralization of procurement and storage is the best and only solution in every situation. The problem of centralization versus decentralization of procurement activities is not unique to the Defense Department It is also quite common in private industry. In a recent article in Business Record, published by the National Industrial Conference Board, an organization devoted to business affairs, the point is made that there has been a gradual drift toward decentralized purchasing in private industry. One conclusion of this article is that –

"The purchasing function should be guided by what offers the most effective results, whether it be centralized, decentralized, or a combination of both."

Secretary of Defense Wilson's remarks at his press conference of 16 May 1957 are singularly appropriate in this context:

"My former experience, about every 3 years someone would raise the question wouldn't we save money in General Motors if we centralized the thing and did all the buying in one big place, pointing out that the Buick company paid a few cents more a thousand for some nuts or bolts or screws or something, all the common items, and we would look it over again and decide no, that it wasn't the right way to do it, and it was much more efficient and effective, and our big problem was to decentralize the thing and clarify the policy."

Mr. Chairman, there is a basic difference between the unification of our Armed Services as contemplated by the National Security Act and merger as recommended by those who believe that the savings of dollars possible in merger are far more important than the functions of the separate Services.

Mr. Chairman, I do not believe for one moment that the merger of our Armed Services would save the taxpayers one thin dime. If anything, I am sure that merger might well bring about added costs.

I am convinced, and very thoroughly convinced, that were we to merge our 4 Services under one head; were we to have one single staff system; were we to adopt one uniform – we would be creating a military monstrosity that would be an open invitation to disaster.

We hear much about duplication of effort – I do not question for a moment that there is duplication of effort – but it is a competitive type of duplication that assures this Nation military supremacy in the quality of its weapons.

There has been altogether too much misguided criticism of so-called competition between the Armed Forces, particularly with respect to missile development.

Mr. Chairman, I have followed this missile development matter most closely and I am certain in my own mind that controlled competition, instead of being wasteful, is vitally necessary. We must approach any specific major problem of missile development with boldness and objectivity. We are dealing with a vast realm of unknown factors. We are truly exploring the unknown. I know of no surer way to jeopardize our Nation than to insist that only one line of missile development be followed.

I readily grant that it would be possible, although fatally injurious, to eliminate missile competition between the Services. But while we have the power to eliminate interservice competition in the development of missiles, we would not have the power to eliminate Russian competition for missile superiority.

Therefore our Armed Forces must not be restricted to one arbitrary line of missile development. If we do not have competition – separate but different approaches toward the solution of the missile problems – we will never know if there really was a better line of

development in our quest for missile superiority. We would not know if it were possible to develop better missiles until war came and the Russians then might show us that our chosen method was perhaps not the best one.

We must not eliminate wholesome and constructive competition in the Armed Forces. It is the stimulus for great achievement. It is the only reasonable assurance of superiority in this vastly complicated technological world in which we live. Eliminate competition, establish a system that provides for only one line of development in armaments, and you have a oneway ticket to defeat.

Competition is the heart and soul of American industry, and the American people. Why should it be different in the Armed Services? What is wrong with esprit de corps? What is wrong with a man's having pride in his own unit, or his own branch of the Service?

Those who advocate merger do so in the face of history which has proved that a single staff system cannot possibly function under a total war concept, or even a limited war concept, so long as the military movements involve land, sea and air.

The Prussian single staff system failed Germany twice in this century. Are we to take the lessons of history, stare them straight in the face, and then completely ignore them? Even our industrial giants, such as General Motors and others, have learned that decentralization not only is profitable, but essential to successful operation.

I know of no individual now alive capable of directing all 4 of the services, either from a staff level or an operational level.

I know of no individual now alive who could completely divorce his own service background to the point where he could view all 4 Services on a purely objective basis.

But beyond that is the fact that our 4 Services exist for the simple reason that there are 4 separate and distinct missions which are assigned to them. The 4 Services do not exist for the sake of tradition, nor do they exist for the sake of providing billets for generals and admirals. They exist, in my opinion, because of the urgent necessity for maintaining a balanced force, which proved its mettle in WW II, again in Korea, and may well prove its wisdom in the event of another conflict.

Under our present system we do have competition — competition which is healthy and which produces the finest weapons obtainable.

We had the same situation prior to WW II, when the Navy was developing air-cooled aircraft engines and the Army was developing liquid-cooled aircraft engines. Each thought the other was wrong, but as it turned out there was a need for both in different phases of WW II. However, had we had a single service concept in effect at that time, we might well have ended up with just a liquid-cooled engine and our efforts in the Pacific theater might have become a world tragedy, since liquid-cooled engines could not attain the altitudes necessary to combat the Japanese Zero.

I use this merely as an illustration of the differences between competition and duplication.

The same situation may well be true in the field of guided missiles. Certainly, guided missiles are expensive, but I do not believe anyone can sincerely question the fact that guided missiles and our superiority in this field may well prove to be the one factor which will prevent another war in the years ahead. But even in this field, it is clear to me that there is adequate room for the development of 3 separate systems — one for the Army, one for the Navy and the other for the Air Force.

What might appear to some to be duplication, in my opinion, actually amounts to competition. But that competition, even in similar missiles, does not necessarily involve a waste of funds, for certainly the nation that has in its possession the most up-to-date and most improved guided missiles will control the destiny of the world.

That there is a certain amount of conflict between the Army and the Air Force with regard to the control of missiles cannot be denied. That there is a certain amount of conflict between the expenditure of funds for aircraft carriers and other types of weapons cannot be denied.

But to me it is not improper for a Service to advocate its own weapons system. In fact, it is essential in order that the Congress may choose wisely in appropriating the necessary funds for future developments.

But the very thing suggested, merger, would eliminate entirely this type of advocacy, and would put the average Member in the position of having only one choice — that of believing the testimony of the single service staff, or not believing that testimony.

Should we ever adopt a single service concept in this nation on the theory that it will save money, not only will we be endangering our own national security but we will certainly be deluding ourselves with respect to savings.

I am firmly of the opinion that no military command system has ever been devised that is equivalent to our present Joint Chiefs of Staff system. Through this system we receive the benefit of the combined views of 4 persons, each an expert in his own particular field. But in other areas of the world, we operate joint commands and do so very successfully. Thus, the decisions which are arrived at through a combination of sound minds, arriving at sound conclusions, make it possible for joint commands in other theaters of operation to function well.

But when the day arrives that we have a super staff, or a single staff, or a single uniform, or a merger of the 4 Services, we will have destroyed not only the morale of the Armed Services, not only the wisdom of the joint staff made up of representatives from all 4 Services, but we will also be placing our dependence upon an assumption that 4 separate missions, involving the technicalities, the complexities, and the skills of these 4 Services can be merged into one, at a time when it is even difficult for each of the separate Services to maintain the skills necessary in their particular fields.

I trust that our nation will never make the fatal error of merging our Armed Forces, or of even adopting something approaching merger. USMC

FIRST AID — ATOMIC STYLE

Under today's conditions frontline units must be prepared to take care of themselves

By Capt James W. Hanker

PICTURE YOURSELF AS THE SQUAD leader of the 2d squad, 2d Platoon, of Charlie Company. "Charging Charlie," along with the rest of the 1st Battalion, has just hit the road after a 3-day respite in a seaport town. The rest was the reward for a job well done as well as a chance for replacements to be flown in from one of the various helicopter assault carrier forces some 60 miles out at sea.

The scream of a siren splits the air. The radar warning jeep has detected enemy air! Acting compulsively, as the result of long training and experience, you hustle your squad toward the trees that are some 200 yards off to the right flank. Suddenly a flash of intense light blanches the surrounding area and a gargantuan explosion rips the air with heat and shock waves. Your outfit has been hit by an atomic weapon!

You throw your hands up instinctively and fall to the ground. Fifteen seconds later, a number 10 boot and a loud voice make you realize that you are still alive. Your face and the back of your right hand feel a little warm but otherwise you are all in one piece.

"Quit laying there, Sergeant," shouts the Gunny, "and get that squad of yours organized. Assemble them on the double, check their atomic aid kits, their pocket dosimeters, and be ready to move out in 5 minutes. Remember that your call sign now is Burn Team #2, Charlie Company."

Atomic aid kits? Burn team #2? Pocket dosimeters? No, this is not science fiction. It may be a solution to one of the biggest problems that is facing military planners today: that of being able to successfully treat, in a tactical situation, a large number of simultaneously incurred casualties as the result of an atomic detonation. In past conflicts, such as the island campaigns of WW II, we have found that, with the exception of isolated cases, a division commander can usually expect about 25 per cent casualties during an engagement. We have also determined that one or two corpsmen per company-sized unit and a like number of doctors per battalion-sized unit, plus some additional help from personnel in battalion H&S Company, can usually take care of the treatment of this 25 per cent. These casualties, although somewhat "bunched" together, usually occurred at various times throughout the campaign. In the case of an atomic weapon, however, we can expect the majority of our casualties to be produced in an instant. Now, rather than having 25 per cent casualties over a period of time, a battalion commander can be faced with this percentage and probably one higher in a few moments. It is my belief that the successful treatment of these men would be an extremely difficult, if not an impossible, task to accomplish with our present organization. However, I do not believe that we can solve this problem by simply bolstering our forces with the addition of corpsmen and battalion surgeons. I believe that once again we can rely upon the backbone of the Marine Corps itself, the enlisted man. I do not advocate, however, training the enlisted man to the specialized level of the corpsman, but feel that the answer possibly lies in the implementation of the following plan.

Organization

Each squad of every company-sized unit would be, in addition to regular training, thoroughly instructed in one of the following:

1) Treatment of burns. These squads to be known as "Burn Teams."

2) Treatment of broken and dislocated bones. These squads to be known as "Fracture Teams."

3) Treatment of excessive bleed-

ing wounds and the administration of plasma. These squads to be known as "Blood Teams."

In line with the importance and the usual occurrence of injuries that each of these teams will be treating I believe that 50 per cent of these squads should be trained as "Blood Teams," and the remaining 50 per cent should be equally divided between "Burn Teams" and "Fracture Teams." In regards to the latter, the word fracture is used in lieu of the word bone because of the similarity between the sound of the word bone and the word burn which could be easily misunderstood in case of hasty or poor message transmission. This instruction would be integrated into the regular training program and would consist of the following general schedule.

1) All teams: 8 hours on up-to-date, general, first aid principles and practices.

2) Blood Teams: In addition to the above training each blood team would be given 16 hours as outlined below:

a. Wounds, identification and treatment of—4 hours.

b. Plasma administration—8 hours.

c. Shock, identification and treatment of—4 hours.

3) Burn Teams: In addition to the general training, each burn team would be given the 12 hours of instruction as outlined below:

a. Burns, identification and treatment of—8 hours.

b. Shock, identification and treatment of—4 hours.

4) Fracture Teams: In addition to the general instruction, each of the fracture teams would be given the following:

a. Broken bones, dislocations, identification and treatment of — 8 hours.

b. Administration of special splints, slings — 8 hours.

c. Shock, identification and treatment of—4 hours.

In the case of the transfer of an individual he would be placed in the same general classification of squad if at all possible. If this is found to be impracticable, training would have to be accomplished on the individual by the members of the squad to which he has been transferred. If a promotion should place a man in a position of additional or different responsibility the same new instruction by the proper responsible personnel shall be performed. Any reorientation on any of the subjects would be performed as it is found to be necessary.

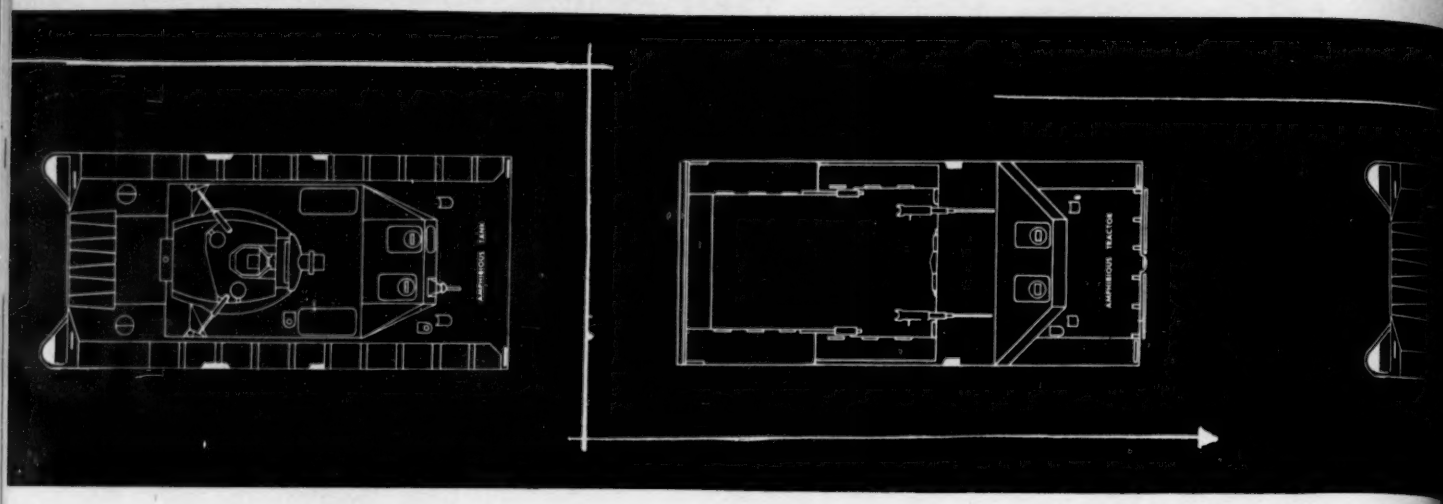
Now let us do a flashback. Once again you are the squad leader of the 2d Squad of the 2d Platoon, Charlie Company. As instructed by the Gunny you have assembled your squad under cover of the trees. After checking to insure that they have come through the detonation in good shape you begin a list of mental checkoffs. First you have each of the fire team leaders inspect the atomic aid kits to insure that they are in readiness. These kits contain, in addition to the standard items, articles that have been determined necessary for the treatment of one of the general injuries, burns, bleeding wounds or bone disorders. As soon as these kits have been inspected the next step is to instruct the fire team leaders to check the pocket dosimeters of each man. Instruction has been given to the individual as to the proper method of reading these dosimeters. In addition to these precautions there would also be at least one monitor team per company-sized unit in the same area with larger, more reliable gear. Any Marine that is found to have a pocket dosimeter that is not functioning properly is instructed to stay in the near vicinity of a "buddy" at all times. These 2 inspections are no sooner over than the voice of the Gunny once again breaks the working stillness. "On the road on the double."

Pocket Dosimeter

Pac. Transducer Corp.

Your squad is assembled on the road in short order and helicopters began to appear. These were ordered by the unit commander so that your outfit can arrive at the stricken area as soon as is possible. Five minutes later you and your squad are heli-lifted and 5 minutes after take-off you are being set down in the area of the afflicted troops. Fellow Marines, members of the unit that was occupying the hit objective are literally strewn around the landscape. Some are beginning to sit up now and are gazing dazedly around, most of them are badly burned. The battalion surgeon and the corpsman are nearby and as your squad enters the area he turns toward you. Recognizing your squad to be a Burn Team because of the red arm bands that you have slipped on while in the helicopters, he shouts, "The worst burn cases are over that hill to the left, take your team there on the double." You proceed as ordered and soon the team is working as fast as it can. Just as you are treating the last casualties the evacuation helicopters begin lifting the first ones out of the area.

Once again the Gunny appears on the scene. This time he addresses you as the 2d Platoon and assigns your squad a zone of defense of the objective that you are standing on. Here, I believe, is the major advantage of this system. The same units which were brought forward to render first aid can now be utilized to act as replacements. It should be a fairly simple task to organize them for the replacement job as the squads have been kept intact. Helicopters coming in for evacuation could bring in the initial important supplies, such as ammunition and water. Rather than have the area over-run with non tactical personnel, such as corpsmen and surgeons, we have achieved 2 objectives, first aid assistance to the wounded and replacement of the stricken unit, at one time. USMC



Evolution of the AMPHIBIOUS TANK

By Richard M. Ogorkiewicz

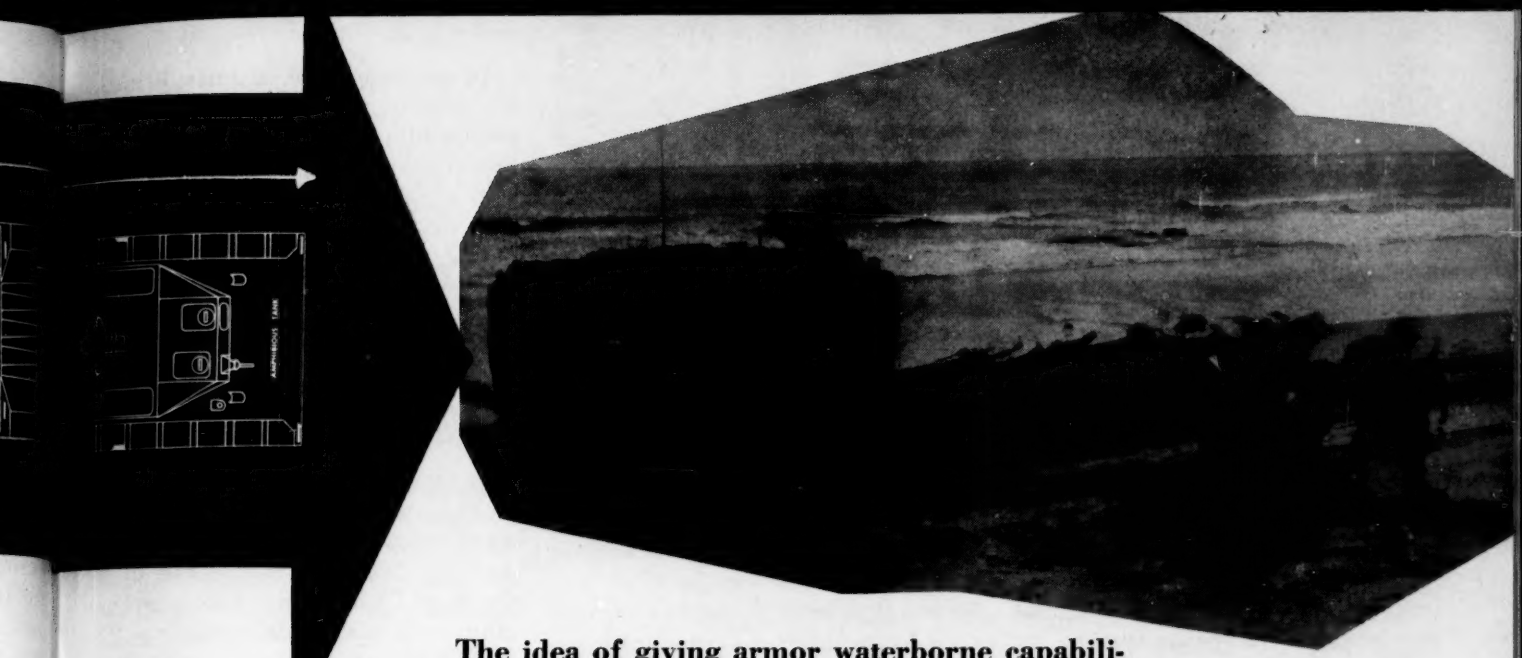
ALTHOUGH AMPHIBIOUS ARMORED vehicles have come to be recognized as an essential element of an amphibious force, the story of the amphibious tank is one of the least known aspects of the history of amphibious warfare. The reason is largely because it is such a fragmentary story and the practical application of the amphibious tank is still relatively recent—much more recent, for instance, than that of the combat aircraft or of ground combat vehicles.

The conception of the amphibious tank is, however, at least as old as the tank itself. The automotive combat vehicle had hardly begun to take shape when thoughts turned toward applying it to the solution of the age-old problems of crossing water obstacles and of landing from the sea on hostile shores. The connection between the first armored vehicles and the amphibious field was all the more immediate as the first tanks, built in England, were actually sponsored by the British Admiralty and were originally designated as "landships."

The first successful military amphibious vehicle actually appears to have been tried in 1910 by the French Corps of Engineers. This—the Ravailler amphibian—was, however, only a 4-wheeled car. Thereafter practically all the initial development took place in England. In recent years, though, Soviet propaganda has claimed that the first tracked amphibian, as well as the first tank, was built in Russia by Porokhovshchikov, in 1915, a few months before the first British tank.

The first British tanks were certainly not amphibious, being intended principally to break the deadlock of trench warfare into which the Western Front had settled in 1915. But soon after they appeared, a scheme was advanced for using them in an amphibious raid on the Belgian coast then in German hands. This project was too ambitious considering the primitive state of the original equipment and the whole idea of the raid was eventually abandoned.

Nevertheless, the requirement for a tank which could take part in amphibious operations remained, and shortly before the end of World War I the first tank successfully crossed a water obstacle. This was a



The idea of giving armor waterborne capabilities is as old as the tank itself — however, a practical combat vehicle did not come into existence until after WWII was well under way

British Mark V, a typical 30-ton heavy tank of the period which, after waterproofing and the attachment of a caisson to either side, crossed the river Thames near London in October 1918.

The caisson-flotation method was next considered for the Mark IX, a large infantry and supply carrier, based on the contemporary heavy tanks and, incidentally, the first tracked armored personnel carrier designed and built as such. A much greater step toward an amphibious tank was made after the war with the appearance of the Medium D tank.

The Medium D was one of those rare designs really ahead of its time. It was originally conceived for the mobile component of a massive Allied tank offensive planned for 1919, a force which would strike deep into hostile rear areas paralyzing enemy headquarters and communications while masses of heavy tanks and infantry assaulted his front line. "Plan 1919," as it was called, was never put into practice as the hostilities in Europe ended before it could be executed. But the development work on the Medium D continued, though at a reduced pace —it was almost 2 years after the Armistice that the first tank was built and tested. When it was, however, it exceeded its maximum target speed of 20 mph, which in itself was twice as high as the maximum speed of any other tank at the time. And this in spite of the fact that the Medium D was a fairly large vehicle, almost as long as the LVTP5, and weighed some 15 tons.

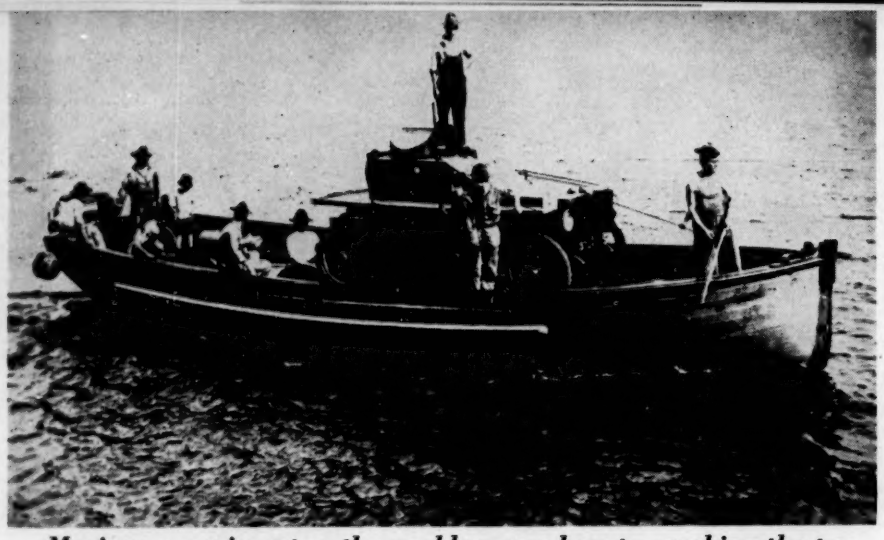
The land trials of the Medium D were followed by water trials, which began well, but received a severe set back when the vehicle developed a leak and sank in the Thames near the Woolwich Arsenal, London. The vehicle was salvaged and the development continued with a modified design and a similar but lighter, 8-ton model known as the Light Infantry Tank was designed. Two of the latter were built by 1922 and on trials proved themselves capable of a speed of up to 30 mph on land and about 1½ mph in water.

The origin of the Medium D and of the "Plan 1919" was very largely due to Gen (then colonel) J. F. C. Fuller who was Chief of Staff of the British Tank Corps during WW I. After the war Gen Fuller set himself to propagate the idea of armored forces and his prophetic vision illuminated the path of mechanization not only in ground but also in amphibious operations. As far as the latter were concerned, soon after World War I he pictured future landing operations executed by tanks launched from special tank carrying ships. In 1920, in a lecture given at the Royal United Service Institution in London, he even mentioned the possibility of launching tanks from submarine tank carriers—an idea presaging the submarine troop carrier which was experimented with for some time after WW II by the US Marine Corps.

All these revolutionary ideas found little support at the time and the handful of British tank pioneers had to fight hard to retain even 4 tank battalions in the post-war British Army. The development of the equipment ran up against similar difficulties and the Medium D and its derivatives proved too far ahead of their time. Mechanical troubles which were only to be expected with such an advance model were seized upon to condemn it and in 1923, in a wave of financial stringency, it was finally abandoned. At the same time the Government Tank Design Department, headed by Lt Col Philip Johnson, which was responsible for this work was wound up and with it died for a time the first hope of an amphibious combat vehicle.

However, the idea did not die out altogether. Even before the British Medium D and the Light Infantry tanks were abandoned, work had begun in the United States, where the Medium D considerably influenced the design of the first post-war US tank — the Medium A.

Neither the Medium A nor its subsequent developments were amphibious. In 1920, as part of the development of a light reconnaissance tractor for the US Ordnance, the second modification of the Peoria-built model was made amphibious. Five other versions were



Marines experiment — the problem was how to combine the two

built between 1920 and 1922, but the development got no further.

Once more, however, the development of the amphibious combat vehicle was taken up elsewhere—this time by J. Walter Christie, who shortly after WW I designed a number of self-propelled gun carriages for the US Ordnance and who in 1922 came out with his first amphibian.

The Christie amphibian has usually been referred to as a tank but more correctly it was an open top, amphibious, self-propelled, 75 mm gun. One of its salient points was the convertible feature associated with Christie designs, which enabled it to travel on tracks or on wheels when the tracks were removed. Another point was that unlike the earlier British Medium D and the much more recent LVTs it was propelled in water by means of two screws instead of tracks. It was rebuilt twice, the second version being longer than the first and the third having 4 bogie wheels per side instead of 3 and being covered in.

The US Army and the Marine Corps tested it and during the trials it swam across the Hudson and the Potomac. In 1923, at Culebra, it gave the first practical demonstration of a mechanized ship-to-shore movement when it swam ashore from the USS *Wisconsin*. Six vehicles of the second type were procured and were used by the Marine Corps in China, but beyond this there was temporarily no progress and Walter Christie turned his attention once more to ground combat vehicles.

The loss of Walter Christie to the amphibious field was certainly a gain to land warfare for his next and final series of vehicles built between 1928 and 1932 marked a great step forward in armored vehicle design, particularly with regard to high speed suspensions and mobility. Several outstanding vehicles, such as the T3 Medium Tank, were built for the US Army but ultimately Christie was no more fortunate in getting his tanks adopted in the United States than his amphibians.

Two other countries did, however, adopt Christie's tank designs. One was Soviet Russia which purchased 2 Christie tanks in 1931 and copied and developed them on a large scale under the designation of BT, or "fast tanks." It was from the BT series that the T34 medium tank of WW II and the T34/85 of Korean fame evolved, as well as the latest 100 mm gun T54. The other country was Great Britain where a whole series of cruiser tanks—from the A13 of 1938 to the Comet of 1945—used the Christie type suspension.

In the meantime, in the amphibious field, little happened until the appearance, in 1930, of a new British amphibious tank built by the great shipbuilding and armament firm of Vickers-Armstrong. The tank division of Vickers-Armstrong was the sole designer and producer of armored vehicles in Britain for the greater part of the period between WW I and II and the 2 experimental amphibious tanks which it produced were part of the A4 series of Vickers-Carden-Loyd light tanks for the British Army.

Designated the A4E11 and the A4E12, the 2 Vickers amphibians were light, 7,500 lb. vehicles with a crew of 2 and an armament of a single .303 Vickers machine gun. On land their maximum speed was 20 mph and in water they could propel themselves at up to 3.7 mph by means of a single screw.

The combat potential of such light vehicles was limited though, in all fairness, it must be mentioned that the general trend at the time was toward relatively large numbers of small tanks rather than smaller numbers of more powerfully armed models. Their amphibious capabilities, too, were limited and they were capable of operating only in calm water. Mechanically, however, they were successful and reliable. They attracted a great deal of attention at the time even though the British Army failed to adopt them. Soviet Russia bought 8 samples when this vehicle became available commercially and subsequently went into quantity production with a very similar model designated the T37. A few more of the Vickers amphibians were purchased by China and the Netherlands East Indies.

As far as the Russians were concerned they regarded their light amphibious tanks principally as reconnaissance vehicles, a role in which their light armor and armament were less of a handicap and where their amphibious characteristics were particularly useful. Apart from the T37 the Russians also built a small quantity of large 6-wheeled amphibious armored cars and later a somewhat improved version of the T37, the T38 amphibious tank. The latter, apart from being one of the few amphibious vehicles of its day, also had the distinction of being the first tank carried by air, during peace time Soviet maneuvers in the

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mid-'30s slung under the bellies of ANT-6 transport-bombers.

Soviet interest in amphibious tanks continued into the early stages of WW II, when almost simultaneously with the introduction of the much better known T34 medium and KV heavy tanks they brought out the T40 amphibious light tank. The T40 did not, however, show up particularly well in the early Soviet-German campaigns thus justifying partly the attitude of other armies which generally showed little interest in this type of vehicle. What little effort was devoted to amphibious light tanks was half-hearted and did not proceed beyond the experimental stage.

In 1935, for instance, the French built a light amphibious reconnaissance tank for their cavalry. This vehicle, the DP2 was, however, damaged and sank during its first amphibious trials. In England, in 1939, Vickers-Armstrong built one more experimental amphibian based on the contemporary British Mark VI light tank. The Czechs built one also, the F4HE, which it was generally assumed at the time, the Germans would take over with the rest of Czech armor after the occupation of Czechoslovakia in 1939. As a result the F4HE appeared in all the 1940-41 British and US manuals of German equipment! In fact, however, the Germans showed as little interest in this type of vehicle as most others and did not continue its development.

The only people apart from the Russians to show consistent interest in amphibious tanks before WW II were the Japanese. Even when the Russians temporarily ceased the development of the T40, when this tank failed to stand up to the combat conditions of the Eastern Front, the Japanese persevered and continued their development right up to the end of WW II.

The Japanese had already shown considerable interest in Christie's original amphibian and in the Vickers-Armstrong model of 1930, and in the early '30s began to develop and build amphibious armored vehicles of their own. Two lines of development were actually pursued, one by the Japanese Army and the other by the Imperial Navy. The latter was generally more successful

Quantico 1923 — Christie's amphibian with a 75

and produced the best known Japanese amphibian, the Type 2 "Kamisha" light tank of WW II.

"Kamisha" was a 24,500 lb. vehicle with a crew of 3 and an armament of one 37 mm gun and 2 machine guns. As a design it belonged to much the same category as the 1930 Vickers-Armstrong amphibious light tanks and like them was propelled in water by means of screws, but in this case two instead of one. It incorporated, however, one novel feature in the shape of 2 very neat detachable floats—one at the front and one at the rear. These gave the necessary buoyancy and stability in water and being detachable did not impare permanently the vehicle's performance on land.

The detachable float feature was tried on several other vehicles, including the Navy's "Kachisha" 58,000 lb. heavy amphibious tank. The Navy also had under development a large amphibious carrier, the "Katsusha," while the Army experimented with several light tanks including the "A-Igo" water jet propelled.

All the effort and ingenuity did not, however, bring the Japanese much profit. None of the Japanese amphibians was produced in any quantity. As combat vehicles they were all inadequately armed, and the faulty tactical employment in insignificant driblets condemned them to failure, just as it did Japanese armored forces on land.

In the meantime, well before the Japanese entered the struggle for the Pacific, the problem of amphibious operations arose on the other side of the globe. In 1940, after their victory in France, the German forces found themselves faced with "Operation Sealion" — the projected invasion of the British Isles. One aspect of this problem was that of landing tanks, which were chiefly responsible for the Germany victory in France, and the Germans struck upon the idea of a submerged approach as a means of getting tanks ashore during an amphibious landing.

In essence the submerged landing method amounted to sealing tanks and providing them with snorkel type breathing tubes so that they could be launched off shore in relatively shallow water and move along the bottom until they emerged on the hostile shore. "Operation Sealion" never materialized and so this method was never put to test in amphibious operations. It was used, however, with success by German medium tanks during the crossing of the river Bug in Poland on the first day of the German campaign against Russia in June 1941.

Deep fording equipment of the snorkel-tube-type was subsequently incorporated in the design of the famous Tiger I heavy tank, but it does not appear to have been ever used and it did not reappear on later German tanks such as the Panther and Tiger II. The only tracked amphibious equipment used by the Germans was what might best be described as a "tracked tug"—a piece of engineering equipment used chiefly for bridging operations.

When the tide of war changed it was the turn of the British to face the problem of landing tanks—on the shore of the Continent of Europe. They had already pioneered the tank landing craft and this was used for landing Churchill heavy in-

The DD devices—vulnerable

fantry tanks — prepared for fording up to their turret tops—in the amphibious incursion on Dieppe in October 1942. For the main invasion in Normandy, however, the British had developed an entirely novel contrivance for landing tanks, the DD or "Duplex Drive" device.

The DD tank device was the invention of Nicholas Straussler, a Hungarian-born British engineer, who had worked for many years on armored vehicles. Apart from the latter, his designs also included bridging equipment and the DD device was in essence a logical derivative of his collapsible canvas-hulled assault boat. Thus, the DD tank was a standard tank suitably waterproofed fitted with a collapsible canvas hull. When fully extended this hull enabled the tank to float, though unfortunately the tank was well below the water line unable to use its armament until it reached firm ground and the hull could be collapsed.

The DD device was also rather vulnerable to rough seas and enemy fire and the British Admiralty strongly opposed its development. The British Army, however, eventually decided to accept it. It was first tried in 1942 on a Tetrarch light and in the same year orders were given for converting some 650 Valentine infantry tanks into amphibious DD tanks. Curiously enough, like the Soviet T38 amphibious tank, the Tetrarch again linked amphibious with airborne operations. While the T38 was the first tank to be carried by air the Tetrarch was the first tank to go into combat by air—a few having been carried in the large Hamilcar gliders and landed with the British 6th Abn Div on D-day in Normandy.

By 1944, when the Allied armies actually landed in Europe, the Valentine DD tanks had become obsolete and it was decided to convert US-built M4 medium tanks, with which British as well as US armored forces were equipped, into DD amphibious tanks. Several hundred were converted in Britain just 5 months before D-day, on the personal intervention of Gen Eisenhower.

By D-day several British and 3 US tank battalions were trained and equipped with DD M4 medium tanks. In the British landing zones they were used with some success though on account of rough weather many could not be launched in the water and had to be landed in the normal way from landing craft like the rest of the British assault armor. It was the latter rather than the DD tanks which was vindicated. Altogether, the armor landed with the assault waves in the British sector amounted to 3 armored brigades and many special units of mine sweeping and assault engineer tanks. Their performance earned them high praise from Allied commanders.

Compared with the British, the use of tanks in the American sector was limited. Of the 2 US DD tank battalions which were deployed, only one was launched as intended and of this only 2 tanks reached the shore, thus justifying some of the British Admiralty's worst fears about the DD device.

Throughout the early stages of WW II the US Army confined its efforts in the sphere of amphibious tracked vehicles to the light tractor which was standardized as the M29 and which was actually originally intended for oversnow operation. It was only in the latter part of the war that the Ordnance Corps built the T86 and T87 amphibious self-propelled guns based on the 76 mm M18 tank destroyer and proceeded with the development of tank flotation methods based on large detachable steel floats.

This last method was similar in principle to that used on the "Kamisha" and other Japanese amphibious tanks and had the great advantage over the British DD approach in that it was far less vulnerable and it also enabled the main armament to be used while in water. Its great disadvantage compared with the DD device was the size of the floats and the consequent demand on shipboard space. For instance, the M19 swimming device developed for the M4 medium tank increased its length from 19 to 47 feet and its width from 8½ to 11 feet.

The work on the swimming devices was actually begun in 1943, but by the end of WW II it had not progressed far enough for them to be used in action. The same applied to the T86 and T87 amphibious self-propelled guns. Work on the swimming devices was subsequently transferred to the M26 and then the M46 medium tanks but, in the meantime, the Army followed the example of the Marine Corps and adopted the LVT as the most practical solution available at the time.

The Army's adoption of the LVT and the formation of Army amphibious tractor battalions was all the more noteworthy for the fact that originally, in 1942, the Armored Board rejected the LVT as too vulnerable. The British adopted the LVT also and made some use of it, as well as of DD M4 tanks, in the crossing of the Rhine in 1945 in the final phase of the war in Europe. When the war ended a special LVT assault brigade of the Royal Marines was being formed for service in the Far East and deliveries begun of the British-built version of the LVT designed and manufactured by the British Nuffield organization and called the Neptune.

The story of the LVT, from Donald Roebling's rescue amphibian of 1936 to the recent LVTP5 has been fully and authoritatively told by LtCol Croizat in the June 1953 GAZETTE. Suffice it here to mention only one point: unlike all the other amphibious combat vehicles, the LVT was not an armored vehicle which was made amphibious, but it was basically an amphibious vehicle adapted to combat needs. Originally, of course, it was only intended as a logistic vehicle and while the first production vehicles were delivered by the Food Machinery Corporation in 1941 it was not until 1942 that the armored version was produced; heavy turretted armament came later still.

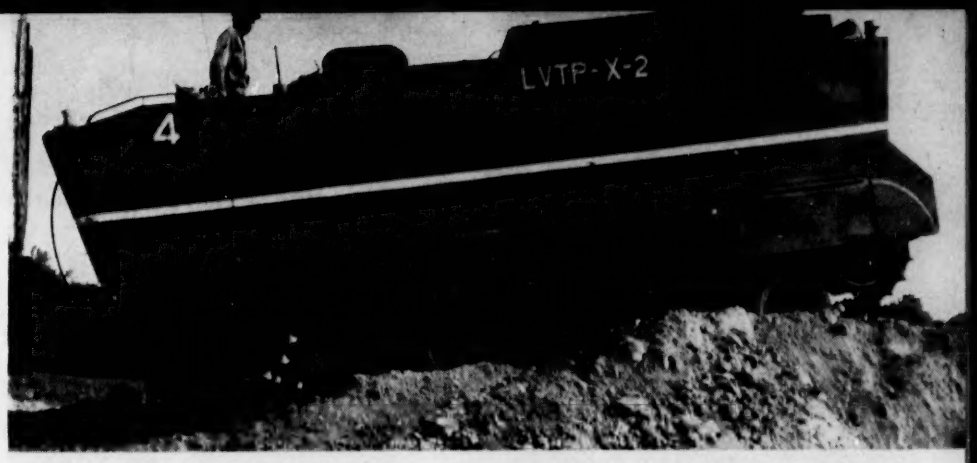
The fact that the LVT is primarily an amphibian vehicle carries both advantages and disadvantages. The advantage is that its water performance is far superior to that of any ground vehicle adapted to amphibi-

ous needs. Its disadvantages are out of water. They are similar to those of the original British Medium D, i.e. large silhouette and overall dimentions and relatively thin armor, so that it can not compete too successfully with ground combat vehicles on land.

However, these facts do not mean that the gap between the characteristics of the amphibious and ground combat vehicles can not be considerably narrowed. The M59 armored personnel carrier, built for the US Army by the Food Machinery Corporation on the basis of their wide experience with the LVT, is a clear indication of what might be done. Admittedly, the M59 has only limited amphibious characteristics, but that does not apply to its Marine counterpart—the LVTPX-2.

The solution to a versatile amphibious combat vehicle will be all the more feasible if the present trends in armorpiercing weapons continue and the relative advantages of armor protection diminish further. The probability that armor will be more easily penetrated will not mean that armor protection will become useless or, even less, that armored vehicles themselves will become obsolete, for armor protection has never been the tank's principal characteristic. It will mean that a limited degree of protection will have to be definitely accepted and more emphasis placed on fire power and mobility. This, however, would only be logical for the tank is fundamentally a weapon carrier, a mobile ground platform, or, as a recent British definition put it, a "vehicle to carry fire power."

Positive signs of a trend toward this conception and toward lighter armored vehicles have recently been provided by the Marine Corps "Ontos," the US Army's 90 mm "Spat" and the French Army's AMX 13 airtransportable tank. Further extension of this trend toward lighter-weight vehicles would certainly hold more promise than trying to bestow amphibious characteristics on the present day 40 or 50 ton medium tanks, whether by the DD approach pursued by the British Army or the detachable float methods developed by the US Ordnance.



The Marine Corps' LVTPX-2 — the latest attempt in search of the ultimate

However, applied to lighter vehicles the detachable float method might well produce a very acceptable amphibious vehicle which would, after jettisoning its floats, be capable of equally efficient ground operation. Trying to design permanently sufficient buoyancy into an armored vehicle will continue to incur the penalty of large silhouette if full amphibious capabilities are required, but if limited characteristics are acceptable a satisfactory solution can be reached by this approach. This is shown by the recent Soviet light amphibious reconnaissance tank, which also demonstrates continued Soviet interest in amphibious tanks.

On the armament side, a successful light amphibious tank is certainly more likely to be achieved. Powerful, light weight armament which was not available in the days of the original Vickers-Armstrong amphibians and the Soviet T37 and T38, and whose absence was largely responsible for their failure, exists now in the shape of various recoilless weapons and short range guided missiles, such as the French Army's SS 10 antitank missile. Thus the solution which has eluded earlier designers because of the lack of suitable armament might now become a reality and the various attempts be finally consolidated into a successful amphibious tank.

In the meantime the need for an amphibious tank remains as great as ever. It alone can provide an amphibious force with the medium-range, mobile fire power which would complement on one hand the short-range fire power of the infantry and on the other the heavier fire power of the artillery, aircraft and naval guns or missiles. The development of an amphibious tank is, therefore, well worth all the effort which can be devoted to it. Its final version should be capable not only of efficient movement on land and in water but also of being lifted by air when required, in keeping with the latest trends in amphibious doctrine toward vertical envelopment.

USMC

★ ★ ★ ★

Left Foot Right Foot

IN THE OLD Imperial Russian Army, officers of the infantry were obliged to take extreme care of the soldiers' feet and footwear. One general went as far as to require that a company commander should know what every one of his 250 men wore on their feet—socks or wrappings. On inspection the general asked the captain what this man wore and ordered the soldier to remove a boot and show what he was wearing. After the general tested 30 soldiers and each time the answer of the captain was right, the general said, "This is astonishing! I know it is impossible for you to know what every one of your 250 men wear — how do you do it?" The captain answered, "All my men wear for inspection a sock on one foot and wrappings on the other; as I say the word they remove the corresponding boot."

Col Boris d'Adamovitch Leliwa

(The GAZETTE *will pay $10.00 for each anecdote published. Submissions should be short and pointed.)*

IN BRIEF

A certificate of Life Membership in the MARINE CORPS ASSOCIATION was presented as the Association's prize during June Week at the US Naval Academy (below). The first presentation was made in behalf of the President of the Association (Gen R. McC. Pate) by the Secretary-Treasurer, BrigGen R. D. Salmon. The prize, awarded to the midshipman submitting the best term paper in the field of operational or doctrinal aspects of ground, air, or amphibious operations, was won by Midn F. W. Parker. The presentation will be an annual award.

Developed for the Office of Naval Research and the US Army, Vertol Aircraft has built the first tilt-wing aircraft (below). When the wing and rotor-propellers are tilted vertically, the aircraft will land and take-off like a helicopter. When they are tilted forward to the horizontal, it will fly like an airplane.

Developed for the Marine Corps, a new, powerful light-weight, water-tight and buoyant radio communications relay set that can be carried by a man, has been produced by the Raytheon Manufacturing Co.

Ideal for helicopter assault operations, the new radio has an effective point to point range up to 10 miles over an extremely narrow sky path. The set operates in the super high frequency range which makes it possible to reduce the diameter of the antenna reflector to 2½ feet.

Power is supplied either from a man-carried generator or from a utility power line.

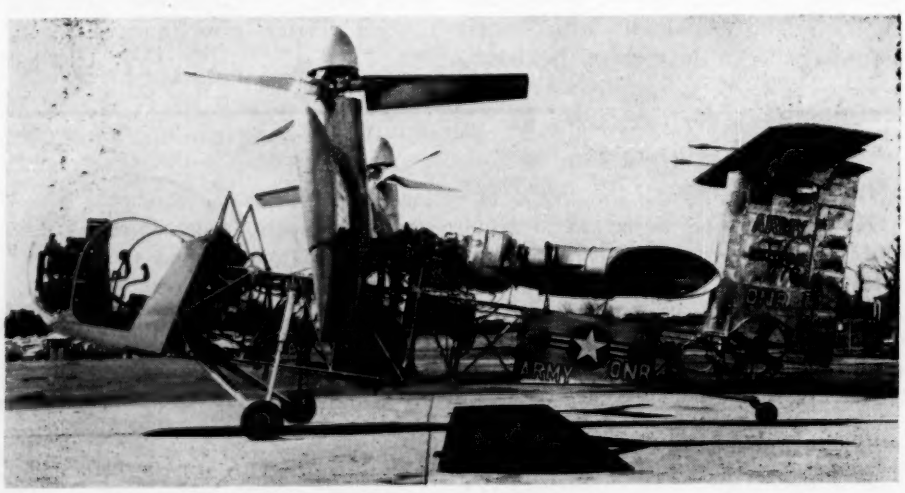
A total weight of 250 lbs., the complete radio can be carried by a team of 5 men.

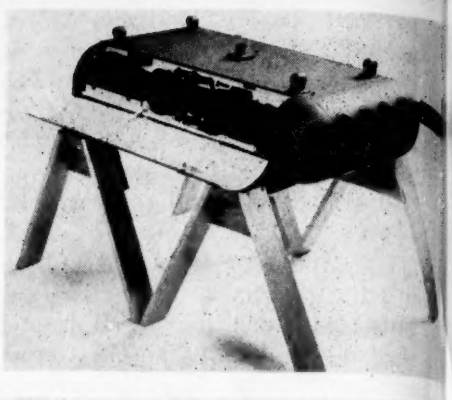
A new method of launching high-speed aircraft from short airfields has been announced by the Navy. Developed by All-American Engineering Co, the device launches aircraft in less than one-fifth of their normal take-off time.

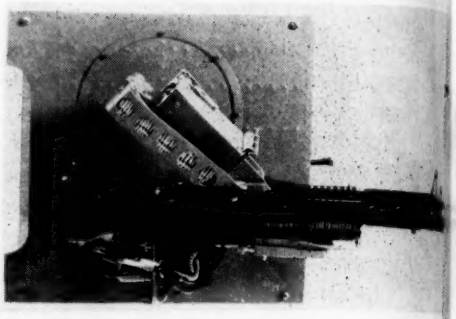
Powered by 6 jet engines, it develops 60,000 horsepower but can be dismantled with comparative ease and transported by air.

Bi-directional in design, the 6 jet engines are arranged in a circle with the exhaust gases flowing into central launching turbines that drive a drum cable system mounted on the same drive shaft.

It is only one-fifth as heavy as a steam catapult and is powered by readily available jet engines. Any aircraft fitted for carrier operation can be launched from the turbo-catapult without modification.







A new type of airborne armament (above) has been introduced by the General Electric Co. It was designed especially for the Marine Corps to decrease the vulnerability of helicopters to ground fire.

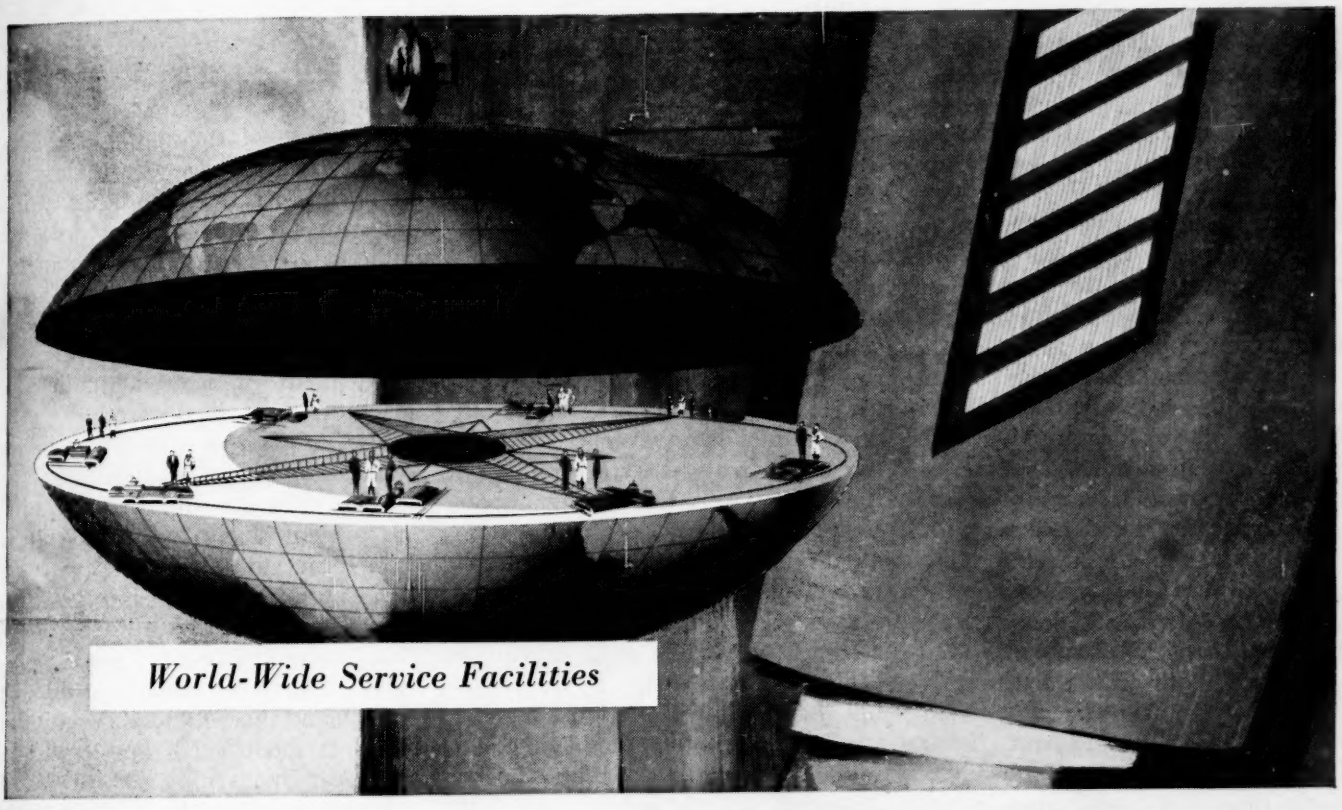
The armament, comprised of 2 kits containing .30 caliber machine guns and small rockets, can easily be attached to any type helicopter and, if necessary, can be removed and used as a regular field weapon. (The machine guns shown are of the newest type, recently adopted by the US Army.)

There are two types of ground fire suppression kits: one consisting of two .30 caliber machine guns attached to both sides of a helicopter and controlled by a hand-grip firing mechanism within the helicopter cockpit; The other, a "fixed" unit, which also contains two .30 caliber machine guns plus 8 3.5-inch rockets could be attached on the under carriage to provide an optimum defensive punch for battle area helicopters.

Both kits are simple in construction, lightweight, and could be installed in a few minutes.

The USS Halibut, first nuclear-powered submarine to be equipped with the Regulus II guided missile, is now under construction at Mare Island. This combination of stealth, speed and tremendous destructive capability makes the ship the closest approach to the ultimate weapon so far attempted. Contracts have been let on another 5 nuclear-powered submarines which will be built at widely separated shipyards.

A VETERAN SERVICE ORGANIZATION



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PISTOL

Experts In Name Only

By Capt C. B. Haslam

EVERY YEAR WE MARINES WHO are either armed with a hand gun, or who might possibly use one, look forward to the days when we assemble at the pistol range to take our turn at cutting out the black. The "old hands" arrive with shooting boxes containing "accurized" .45 caliber pistols, carbide lamps and shooting scopes. With experienced eyes they scan the sky for some sign as to what the weather holds for them. Is it ideal shooting weather or is the sun too bright, thereby causing undue glare upon the target? However, whatever the outlook on the weather may be the "old hands" are prepared for it. Removing their souped-up hand guns they immediately apply an even coat of blackening to the front and rear sights. Then with a contemptuous flip of their cap visors, and upon signal from the tower that it is safe to snap in, they grasp their weapons by their custom made grips and slowly squeeze that "so smooth" trigger. What a thrill it is to line up that old bull's-eye with that wide front sight blade and the wide notch rear sight. That old bull's-eye just seems to automatically sit on top of that front sight. Then comes the fall of the hammer and the old shooter gives a sigh of relief. He knew where that assumed shot went. Right in the center. This was no news to him because for years he had been cutting out the black and there was no good reason for him to believe that he couldn't do it again and again. Yes, he was one of the many *expert* pistol shooters in the Marine Corps. Year after year he had been coming to the range to assume that well-polished standing position. Body facing slightly to the left, right arm outstretched, left hand supported by his belt or thrust in his pocket, feet 12 to 18 inches apart, head erect, and his body in balance he would once again amass at least 390 out of 400. He was an *expert*. His timing was still good. He was under no strain when firing 5 rounds quick fire within 15 seconds. And the bobbers at 25 yards; well, he just couldn't understand how anybody could miss them. Ten points per hit, too. That certainly helped out on the total score. Well, he wasn't too concerned about the others on the line. He snickered as he observed the brand new lieutenant alongside him. He was firing one of those issue pistols; the type with the 7 lb. trigger pull. He could give him a tip about placing some lubriplate at the proper places but why should he? After all it might just be possible that the young lieutenant might nose him out as high man for the week and he didn't want that. The old shooter had many, many tips but he wasn't about to disclose them to anyone. Let them figure it out for themselves.

Yes, the "old hand" was an *expert*. Of course, he couldn't hit a moving target from the crouched position, but that was practical shooting and as far as he knew there was no requirement for practical shooting in the Marine Corps. Apparently the "old timer" is right, since for the past 20 years that I have been a member of the Marine Corps I have never come into contact with a practical hand gun training course. To me there is need for one.

One cannot deny that a hand gun is used for self defense but apparently we have let its secondary use, that of competitive and qualification shooting, push its principal use to one side. This is wrong. To continue the present hand gun training will only make more men expert in name and *not in fact*.

We should emphasize the principal purpose of the hand gun and the only way we can do that is to establish a practical hand gun training course. One question will be immediately raised here; namely, "how can you establish a hand gun training course incorporating practical shooting when a large percentage of men cannot even hit the target under the present system?"

The answer to that is to allot more ammunition to those who are having difficulty qualifying under the present system. Spend a little more time with them in respect to trigger squeeze and, most important, their fear of a 39-ounce weapon that goes "boom." Flinching is the principal reason why most men do not qualify and the only way to cure it is let them shoot until they overcome their fear by learning that the hand gun cannot injure them. Retain the present course for those who have never fired a hand gun before, but immediately upon qualification they should be moved to a practical training course where they can apply their ability to properly squeeze the trigger. This, coupled with the teachings of quick sight alignment and firing from positions other than "erect standing," would instill in the man the fact that he was being trained in the true light of the purpose for being armed with a hand gun.

Law enforcement agencies are trained in the true light of hand gun usage. In addition to competitive target shooting they engage in target practice which prepares them to protect themselves under circumstances which arise calling for immediate action on their part. How are we in the Marine Corps any different? We are not. However, since we are at war only a fraction of the time compared with the instances where law enforcement agencies en-

SHOOTING

gage in fire fights, we have apparently allowed some foreign element to wedge itself between the purpose of having a hand gun and our training for using it. Granted, the instances that hand guns are used in combat are few but we should, nevertheless, do one of two things. Either eliminate the hand gun altogether since the present training is inadequate or give the bearer of such a weapon a training course compatible with its purpose.

Such a training course as proposed is nothing new. Provisions are already made in FM 23-35, *Pistols and Revolvers,* for such a course but apparently it has been overlooked. Certain positions in that manual could be improved or eliminated, but at least its purpose would be compatible with the end sought.

Competitive hand gun shooting has its place but it is completely foreign when evaluated in light of the principal purpose of the weapon. Let us adopt and use a practical hand gun training course so we can all become *experts in fact* as well as in name.

USMC

Realistic Marksmanship

By Col F. P. Henderson

THE PREDICAMENT OF THE rifle shooters with regard to their shooting positions and marksmanship has been previously covered in these pages. But what about the other men in the divisions armed with pistol and the men in the aircraft wings armed with the .30 caliber revolver?

Right now they are about the most harmless individual on the battlefield. They terrify neither the disciplined enemy soldier, nor the audacious guerrilla. Instead of adding to the sum of the small arms fire power of their unit, they require riflemen to protect them when the enemy is near. I am surprised the insurance companies don't charge them extra premiums—like aviators. To prepare ourselves for the warfare of today, we must transform the pistol-packing Marine from a fire fight deficit into a self-confident killer. Our next beachheads will have no safe haven where these Marines are secure from enemy attack.

It takes only one tour on the pistol range with his men during annual qualification firing to convince the troop officer that pistol range marksmanship is for the select few who apparently are endowed by their Creator with some skill not possessed by ordinary Marines. In his more disconsolate moments he may silently subscribe to the old saying, "The best way to disable an enemy, if you are armed with the pistol, is to throw it at him." But this condition doesn't have to exist. It is possible to teach any Marine how to use the pistol so that it becomes the deadly weapon it was meant to be.

I was convinced of this through an interesting experience back in our "Old Corps" which existed in 1941. I'd like to pass it along for what use it may have in making all Marines of the "New Corps" (circa 1957) real fighting men.

Increasing tension between the United States and the Axis powers in 1941 caused the Pacific Fleet to become extremely security conscious. Strict orders came out of Fleet Headquarters concerning the security of ships of the Fleet. While in port, topside security watches were greatly increased. Internally, armed security watches were established throughout all areas of the ship, both at sea and in port, to prevent sabotage. Orders to the sentinels were tough. Challenge, and if the suspected individual doesn't stand, shoot to kill.

These orders caused quite a flap on the USS *San Francisco.* (A finer heavy cruiser never sailed the seven seas.) In the first place it was immediately apparent that the splendid Marine Detachment on the ship was no longer adequate for the ship's security needs. The many new security sentinels required must be furnished by the bluejacket divisions of the ship.

The next item of concern came from arming all men on watch with a loaded .45 caliber pistol. There was a general feeling on board that you could probably arm a Marine with a pistol and he might hit somebody he was shooting at—and not shoot himself in the meantime. But there was considerable anxiety over having a large number of sailors continually armed with a loaded pistol. And there was much disbelief as to their ability to hit anything at all.

Experience on the rifle range in 1940 had reaffirmed the fact that pistol marksmanship was not an outstanding characteristic of the average Marine. After running a detachment of bluejackets through a familiarization pistol course, we were convinced that they might be superb marksmen with an 8-inch rifle or a 5-inch AA gun, but deadeye marksmanship with the pistol was not one of the fine old traditions of the US Navy. Nevertheless, something had to be done to insure that the security sentinels were more than just scarecrows. They had to be able to truly and effectively defend the ship with a .45 caliber pistol if the need arose.

A little reflection on this problem assured us that the standard pistol marksmanship training was not the answer to making our sentries fast

and sure shots. First of all, it did not teach anything about how to rapidly get the pistol out of its awkward holster, load a round in the chamber and fire. This was considered to be a matter of paramount importance if the sentry was to avoid being overpowered, shot, or have his quarry escape before he could unlimber his hip artillery. Second, the shooting position taught on the pistol ranges seemed designed to make it difficult to hit the target. It resolutely avoided any number of things that could be done to make the shooter steadier. And finally, the pistol range position seemed to intentionally make the shooter present the largest possible target to an enemy.

In our dilemma, who should come to our rescue but the good old FBI! We recalled seeing some of the speedy and deadly draw and shoot marksmanship at the FBI Academy at Quantico. Believing that a good US Marine could do anything that anyone else could do, we adapted the FBI techniques to our own needs.

The results obtained far exceeded our expectations. Starting with the Marine Detachment we taught all men how to draw and shoot in the sequence shown in the accompanying photographs. The main idea was to get the gun out of the holster fast, get into a steady position and rapidly fire a number of shots while presenting a small target to the enemy. The accuracy desired was not that necessary to put a single round into a small black bull's-eye, but rather that accuracy which would insure hitting a man with at least one out of several rounds fired. As opposed to rifle range marksmanship accuracy, this intent might be considered comparable to rifle musketry.

The shooter made no attempt to draw a fine bead with his sights on the target. Instead, he was told to point his right arm and its extension, the pistol, at his target and line up the pistol barrel on it. The shooter was not to worry about a slow steady squeeze. Instead, he was to maintain a strong pressure against the receiver with his thumb while pulling off the rounds with his trigger finger.

Using this method of pistol shooting, we found that with very little dry run snapping-in and practice shooting every Marine in the detachment could draw, load his pistol and fire a full magazine in just a few seconds. What's more, he would get about half his shots into a bobber type silhouette target.

The true test of this method of pistol shooting came when we began to train the security watch standers of the bluejacket divisions in its use. To our joy and relief we found that sailors could also become killers with the pistol. A surprising large number of both Marines and sailors turned out to be real dead-eyes. Firing 7 shots in rapid succession at a bobber-type target, they could put 5 or more rounds into it consistently.

I believe there are several reasons why this method of teaching pistol shooting produced more and better *combat* pistol shots than does our standard pistol marksmanship method. In the first place, the man under instruction realizes he is being taught something that does have a practical value on the battlefield, or when he is on a security watch. He realizes that he is being taught something that increases his own chance of killing or wounding an individual enemy before he himself is killed or wounded. Realistic training of this nature always gets a more enthusiastic response than artificial training such as our present pistol marksmanship courses.

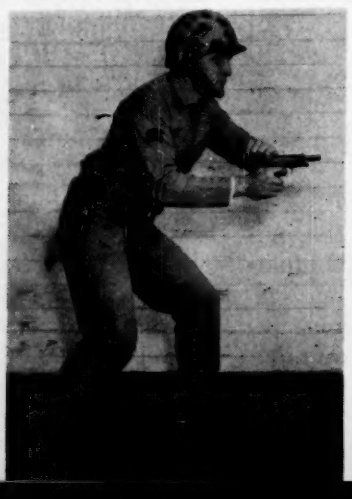
Secondly, the trainee soon learns that he can really hit a man-sized target with a pistol. This increases his confidence in himself and his weapon and leads him to endeavor to improve this capability. He is no longer subject to the frustrated feeling that he is expected to accomplish the impossible. And finally, this method makes pistol shooting fun. It appeals to the latent Wild West gunman and private-eye instinct in all of us. Even crusty old first sergeants and colonels can enjoy going on the range and shooting this kind of pistol marksmanship. When you are doing something you enjoy you usually do it better than something that is just a required chore.

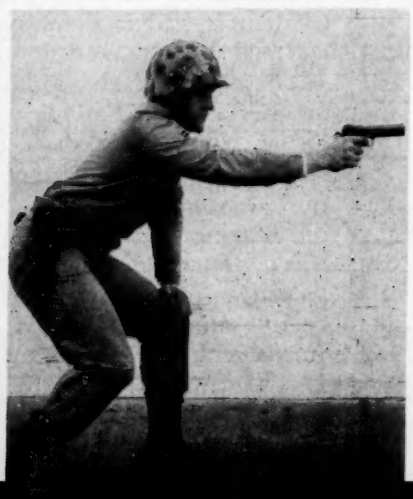
There is one additional refinement of this method of pistol shooting which is most appropriate on the battlefield—shooting from the prone position. In the prone position the shooter offers the least possible target to the enemy and has the steadiest possible shooting position. Many of the Marines who will be called upon to use a pistol on the battlefield will probably use it from the prone position. Yet in our present pistol marksmanship instruction we teach nothing about firing from the prone position. In the draw and shoot sequence illustrated, it is a simple matter to continue the forward movement of the body into the prone position after the pistol is loaded.

We can add realism to our Fleet Marine Force training, increase the chances of battlefield survival for the pistol-armed Marine, and bring sorrow to the camp of our enemies if we discard our present methods of pistol marksmanship training for something more appropriate to both our combat and security force needs.

US MC

***DRAW** — Loaded magazine inserted, but NO round in chamber. Holster flap cut off or tucked up. Move left foot in direction of target. Grasp pistol with right hand and holster with left.*
***LOADING** — When pistol is drawn, grasp slide. As right arm is extended forward, left hand releases slide.*
***FIRING** — Left hand braced on left knee. Right arm fully extended. Line up barrel on target and fire.*

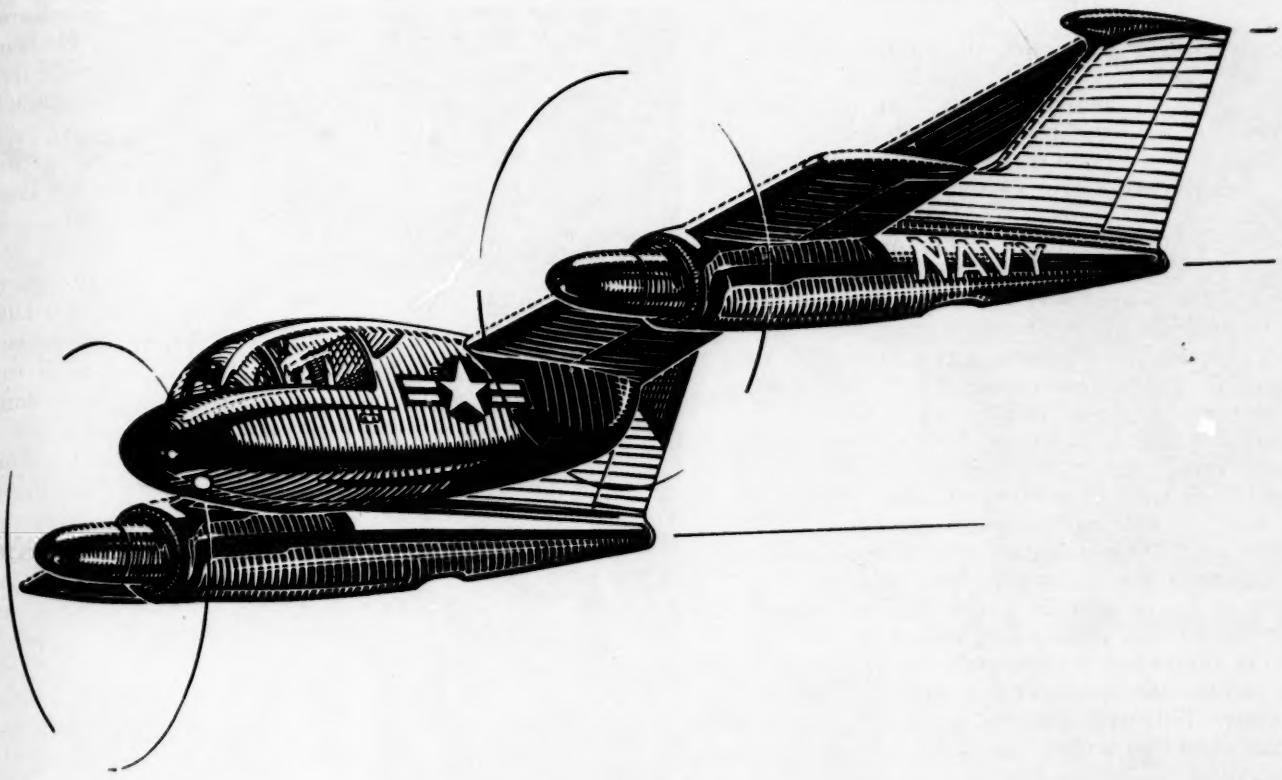




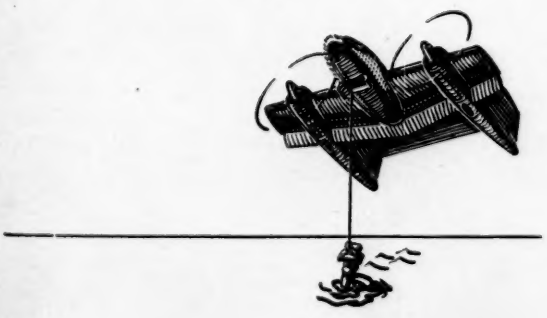
Above: How NOT to shoot a pistol in combat

Below: A realistic pistol firing position

New STOL Aircraft will dart to 300 mph...



...slow to a hover



Kaman Aircraft, under contract to the U.S. Navy, is developing a new and different STOL aircraft concept. Drawing on its experience as a pioneer in the development of turborotor helicopters, Kaman has designed an aircraft which will incorporate the best features of helicopter performance from 0 to 50 mph, and perform as a fixed wing aircraft at speeds up to 300 mph.

This STOL aircraft is another contribution Kaman is proudly making to our National Defense effort.

KAMAN

THE KAMAN AIRCRAFT CORPORATION
Bloomfield, Connecticut

MARINE CORPS

High point of the entire Marine Corps shooting program is the Marine Corps Matches. This year they were held at Camp Matthews, San Diego, where all the top shooters in the Corps were assembled to run off the top-flight eliminations in this intra-Corps competition.

The most important prize in all Marine Corps shooting is the massive Lauchheimer Trophy, symbol of the best pistol and rifle shots in the Marine Corps Matches (1). The winner was Capt S. G. Millar, Force Troops, 29 Palms (left). Second place winner was a newcomer to Marine Corps Team shooting, Pfc L. M. Hunt, 1st Marine Air Wing (center), while third place winner was SSgt E. S. Sarver, 3d Mar Div (right). SSgt Sarver (2) also set a second all-Marine Corps record by firing a 567x600 to win the Pistol Trophy with the highest individual aggregate score.

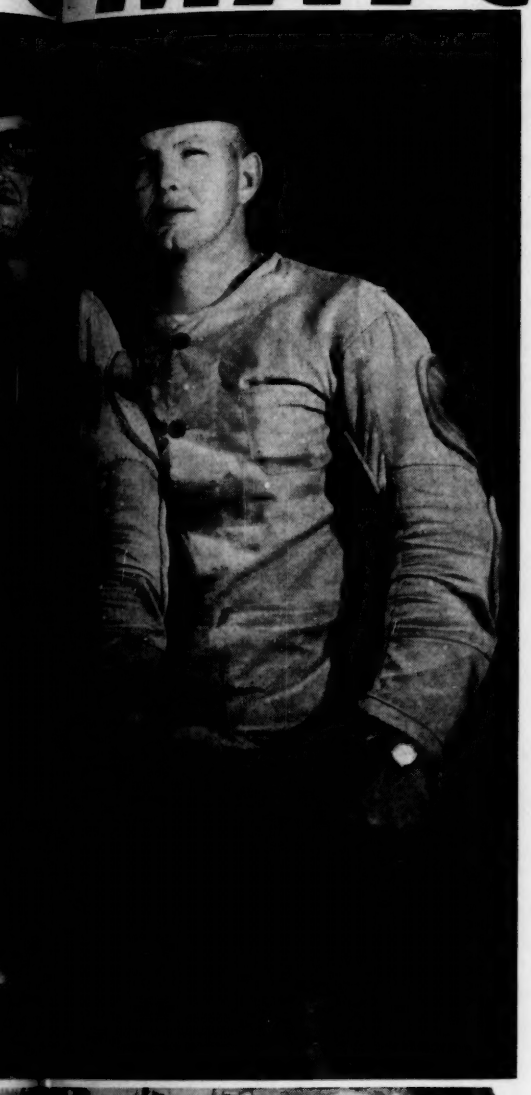
Most talked-about winner was 19-year-old Pfc L. M. Hunt (3), a supply clerk with the 1st MAW in Japan who set a new all-time high of 575x600 to break the existing record for the All-Marine Individual Rifle match course. Because of a technicality he didn't win either a medal or a trophy. This technicality stipulates that a contestant must win a medal in division-match-level competition to be eligible for a place medal or the McDougal Trophy. He had not previously placed in the Pacific Division Matches. Nevertheless, he did place second in the Lauchheimer Trophy with his individual aggregate score. Prior to this year Pfc Hunt had never fired in any kind of match competition.

Sgt C. W. Lemnod (4) won the right to wear a Distinguished Marksman's Badge (rifle) along with capturing first place in the David S. McDougal Memorial Trophy. Sgt Lemnod's score, firing over the 2-day course, was 570x600, 3 points over last year's winning score. His outfit is the Marksmanship Training Unit, Camp Matthews.

Shown in photo 5 is the Western Division's "Red" Team which won the Inter-Division Pistol Team Trophy with a 1335x1500, and photo 6 shows the Western Division "Red" Team which won the Inter-Division Rifle Team Trophy with a score of 2762x3000.

Inter-Division Rifle Team Trophy ▼ 6

PS MATCHES—1957



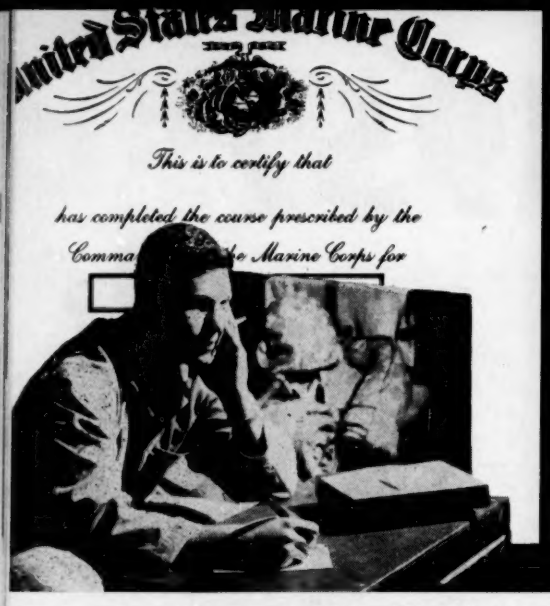
◄ 1
The Lauchheimer Trophy Winners

2 ▼
Individual Pistol Trophy

3 ▲ All-Marine Individual Rifle

4 ►
McDougal Memorial Trophy

5 ▼ Inter-Division Pistol Team Trophy



Yours for the asking

By Maj Theodore D. Hess

The opportunities offered by the Extension School are legion

ARE YOU THE OFFICER WHO ALways indicates "Junior School" as your first and only preference for duty? You've asked for it as long as you can remember, and still you haven't been assigned! You needn't feel your career has been sabotaged because you haven't been permitted to partake of the educational opportunities offered by the Athens of the Marine Corps. Your contemporaries are lined up 6-deep waiting for similar orders. But why wait? The military knowledge you seek is yours for the asking.

Perhaps it is a case of mistaken identity. You are the corporal who missed that deserved third stripe when the composite scores were computed. There is no question in your mind that had you been prepared for the last go-round with the GMST you would have that stripe. To make sure you are ready the next time the messhall opens up for those brainwashing GMSTs, read on.

Or were you the fall guy when your boss was looking for an Embarkation Officer? Not that you were particularly well qualified in that specialty, but you had the reputation for getting a job done, and done well. So the Old Man put the finger on you when the word was passed to make all preparations for getting under way. Got all the tools for the job? Do you have all the latest information concerning concept, plans and co-ordination for the loading and unloading of personnel, equipment and supplies? Are you prepared to compile statistical data pertaining to the movement of the command? What will be your recommendations for allocation of ships, aircraft and railroad cars? If you don't have all the answers at your fingertips, don't get shook. Most of the answers to your problems have been worked out for you. All you have to do is to ask for them.

The Extension School has the mission of paralleling instruction of major tactical importance given by the resident schools of Quantico, viz, Basic School, Communication Officers School, Junior School and Senior School. This mission is predicated on the irreconcilable fact that it is virtually impossible to assign all officers to duty under instruction at the appropriate level. This has little to do with the individual's capabilities, the governing factor is availability — in light of the compelling need to maintain a very real force in readiness. Yet, the value of such instruction is considered to be so vital to the development of fully qualified officers it is made available to all through the medium of extension courses. This means no officer is deprived of the professional benefits of further military training, except by his own volition!

In addition to the extension courses on the officer level, the Extension School provides training by correspondence for all enlisted ranks. These courses are designed to assist enlisted men in preparing for the General Military Subjects Tests and for promotion. Not only are they available to all enlisted Marines, they are required for Marines in specific billets — such as embassy duty. Such courses permit personnel outside of the normal training situation to compete for promotion on nearly equal footing with Marines in the Fleet Marine Force and those for whom school is regularly conducted. Now, by recent authority granted by the Commandant, they may be used to exempt selected personnel from routine training. This obviously keeps more men on productive jobs.

The Extension School is staffed with specialists. Aviation courses are not written by ground officers, a naval aviator does that job. By the same token artillery, communications, intelligence, logistic and mechanized courses are prepared by officers carrying the appropriate MOS and who have had considerable experience in the field of their assigned courses. To further insure the courses are technically correct and tactically sound, they are reviewed in detail by the residence schools. All courses must then be approved by the Director, Marine Corps Educational Center.

Enrollment

Enrollment in the Extension School is a simple matter. All that is required is an application blank, a pen and an urge to learn. Your first sergeant or education officer can normally provide application blanks; if not, write directly to the Director, Extension School for them.

The Enlisted Basic Extension Course is open to all comers. Normally enrollment is accepted only for the entire course, which is designed to help privates and privates first class prepare for GMSTs and promotion. Likewise the Enlisted Advanced Course is designed to help Marines over the GMST hurdles to new stripes. But, unlike the basic course, it is normally available only to noncommissioned officers. However, privates and Pfcs who have successfully completed the basic course will be accepted as advanced students.

The Officers Basic Course is open to all officers, staff noncommissioned officers, and other enlisted who have completed the Enlisted Advanced Course. In the case of the Officers Basic Course it is not necessary to tackle the entire course. Selected subcourses, intended to fill educa-

tional voids or provide specialized training, may be requisitioned. This procedure has been notably successful in providing instructors with reference material not otherwise available.

The Communications Officers Extension Course offers instruction both in current equipment and the tactical employment of communications in the operating forces. Enrollment is open to all officers and NCOs of occupational field 25. Again the entire course or only selected subcourses may be ordered. A recommended program of study in preparation for technical tests for promotion to grades E5, E6 and E7 is contained in the Extension School catalog.

The instruction offered in the Junior Extension Course is at the intermediate level. A basic knowledge of military subjects is a prerequisite to enrollment. This is satisfied by the attainment of the rank of first lieutenant or completion of the Officers Basic Course.

In order to establish eligibility for enrollment in the high-level, Senior Course, an officer must be of field rank or, if company rank, have completed the Junior Course.

Upon completion of each course of instruction the student is awarded a certificate of completion. More important, a copy of the certificate is forwarded to the Commandant of the Marine Corps for incorporation in the student's official file.

What Can It Do For You?

This question naturally arises. The answer, just as naturally, is to be found in your own needs. The advantages afforded by correspondence courses are too numerous to treat in detail. They vary according to the individual's situation, and are dependent on the effort he expends. Here are some of the ways you will benefit:

1) *Promotion*—If you are a career minded Marine and interested in promotion (and who isn't?) Extension School courses are invaluable in preparing for promotion examinations. Some are designed for that specific purpose. It would be unrealistic to visualize an enlisted man who has completed the appropriate courses who is not in a better position to take a promotion exam than one who has not. Similarly, the completion of courses by officers is duly recorded in official records that go before the selection boards.

2) *Technical and Tactical Proficiency*—Many of the courses are either of a technical or tactical nature. Here the benefit to be derived by the student will be reflected in his increased proficiency on the job, which in turn should be reflected in his fitness report. Personnel assigned to jobs with which they are not familiar may find the information they seek in such courses. Even old hands at the game may be rusty in such subjects as staff functioning, map and aerial photograph reading and amphibious planning. A refresher may be all that is needed to put them on top of their jobs.

3) *Filling Gaps in Military Knowledge*—Rarely is there an individual assigned to a command who knows all there is to know about all he needs to know. The newly assigned weapons company commander, like the neophyte battalion commander, may be qualified in every respect—except for the voids of experience in restricted fields. "Press to talk" may be all they know of communications. Perhaps that was enough to know about the subject in past assignments. But now, they must become experts in the field. There is not sufficient time for misguided study of field and technical manuals or a crash course. Hence, the Extension School may well be the best avenue of approach.

4) *Reserve Retirement Credit*—If you are actively searching for means of acquiring retirement credits, the Extension School pays high dividends. Generally, one retirement credit rewards each 3 hours of study.

5) *Keeping in Touch*—Officers serving away from the main body of the Corps can keep in touch through correspondence courses. The infantry officer serving in his "supply tour" won't want to lose his "tactical touch." He will find stimulation in the tactical courses offered and will retain his enthusiasm and interest in tactics by his study. When there is no other way to keep in touch, the Extension School provides the link.

Here then, are some of the advantages offered by the Extension School. They are yours for the asking. USMC

OFFICERS SENIOR EXTENSION COURSE

This course consists of all the subcourses of the JUNIOR course marked with an (*) below, plus the following subcourses:

TAC-3	Tactical Principles
COMM-2	Communications
TAC-6	Infantry Tactics
TAC-8	Division Tactics
TAC-A8	Force in the Amphibious Attack

OFFICERS JUNIOR EXTENSION COURSE

*STF-1	General Introduction
*INT-1	Map and Aerial Photograph Reading
*TAC-9	Military Training
*STF-2	Staff Organization and Functioning — General
*ADM-1	Staff Organization and Functioning — Administration
*INT-2	Staff Organization and Functioning — Intelligence
*TAC-1	Staff Organization and Functioning — Operations
*LOG-1	Staff Organization and Functioning — Logistics
*AVN-1	Aviation Principles and Organization
*AVN-2	Aviation Staff Organization and Functions
*ABC-1	Atomic, Biological and Chemical Warfare
*ADM-2	Rules of Land Warfare and Military Government
*INT-3	Combat Intelligence
TAC-2	Tactical Principles
*LOG-2	Logistics
COMM-1	Communications
TAC-4	Supporting Weapons Organic to the Marine Infantry Battalion and Regiment
*ARTY-1	Field Artillery
*MZ-1	Antimechanized Operations
*ENG-1	Engineers
*ENG-2	Land Mine Warfare
*AVN-3	Air Support Operations
TAC-5	Infantry Tactics
*AVN-4	Helicopter and Air Transport Operations
TAC-7	Special Operations
*ITS-1	Techniques of Instruction
TAC-A4	Amphibious Training
TAC-A5	Amphibious Reconnaissance
TAC-A1	Battalion Landing Team
*TAC-A2	Regimental Landing Team
*ARTY-A1	Artillery in Amphibious Operations
*MZ-A1	Employment of Amphibious Vehicles
MZ-A2	Tanks in Amphibious Operations
*NAV-A1	Naval Aspects in Amphibious Operations
*NGF-A1	Naval Gunfire in Amphibious Operations
*AVN-A1	Aviation in Amphibious Operations
*ENG-A1	Engineers in Amphibious Operations
*LOG-A1	Embarkation and Ship Loading
*LOG-A2	Logistical Support in Amphibious Operations
*LOG-A3	The Shore Party in Amphibious Operations
*MED-A1	Medical Services in Amphibious Operations
*STF-A1	Amphibious Planning
*TAC-A7	Division in the Amphibious Attack

COMMUNICATION OFFICERS EXTENSION COURSE

C-2-I	Field Radio Communications
C-2-II	Field Wire Communications
C-2-III	The Communications Center
C-2-IV	Communication Operating Procedures — Radio, Teletype, Bisual and Sound
C-3-I	Tactical Communications, Infantry Regiment
C-3-II	Tactical Communications, Artillery Regiment
C-3-III	Tactical Communications, Division-Force-Wing
C-4	Aviation Communications

OFFICERS BASIC EXTENSION COURSE

B-1	Basic Indoctrination
B-4	Map and Aerial Photograph Reading
B-5-I	Characteristics of Infantry Weapons
B-5-II	Individual Tactical Training
B-6	Enforcement of Military Law and Order
B-7-I	Basic Infantry Tactics
B-7-II	Tactical Employment of Infantry Weapons
B-7-III	Squad, Platoon and Company Tactics
B-8	Communications
B-9-I	Supporting Arms Organic to Bn anl Regt
B-9-II	Field Artillery and AAA
B-9-III	Adjustment of Artillery and Naval Gunfire by the Front Line Marine
B-9-IV	Air Support
B-9-V	Tanks and Anti-mechanized Operations
B-10	Special Operations
B-11	Leadership and Military Training
B-12	Staff Organization and Functions
B-13	Logistics
TAC-A1	Battalion Landing Team
B-14-II	Troop Life and Training Aboard Ship
B-15	Combat Intelligence
B-16	Military Engineers
B-17	Land Mine Warfare

ENLISTED ADVANCED EXTENSION COURSE

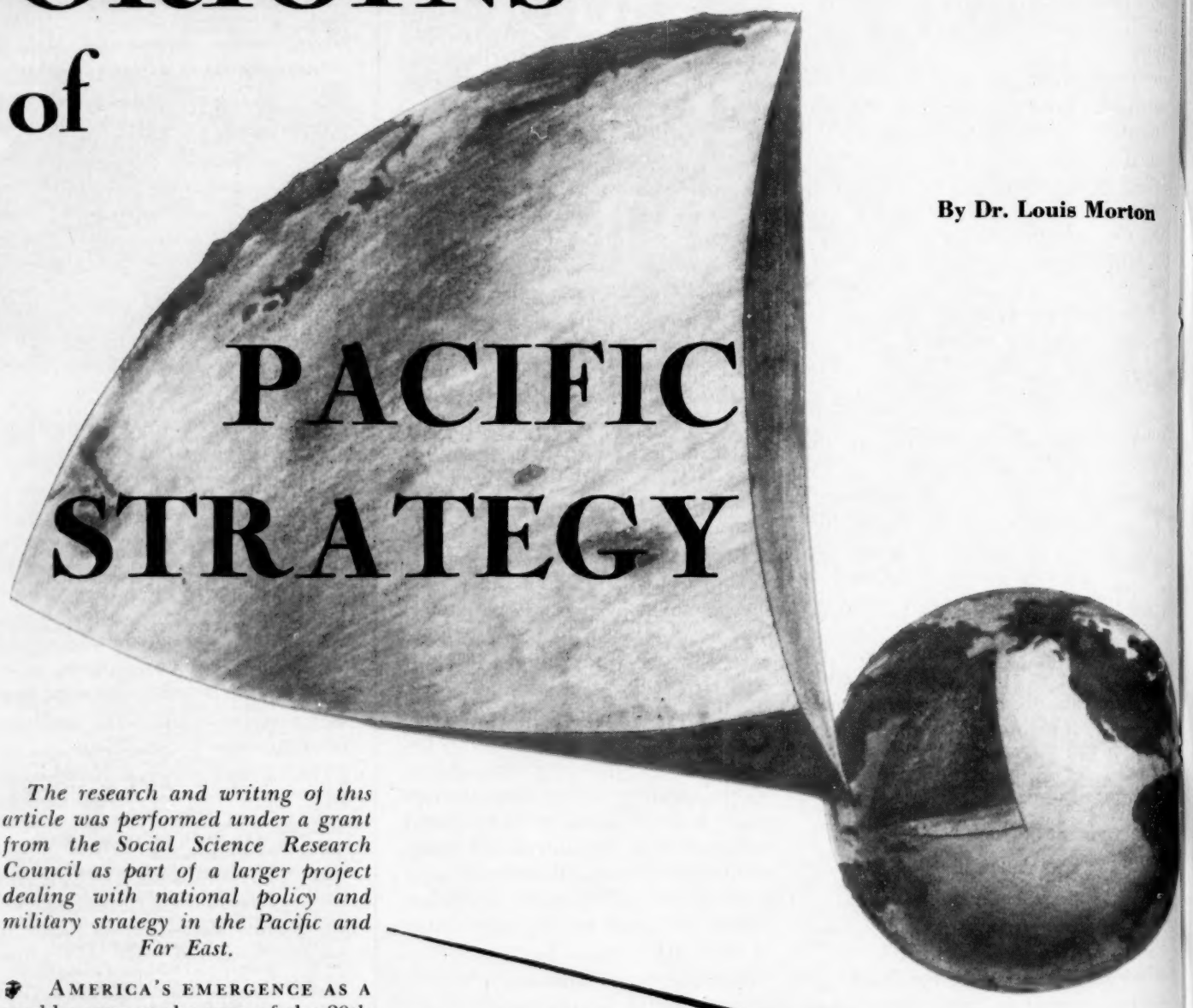
EA-1	Interior Guard Duty
EA-2	Technique of Instruction
EA-3	Leadership
EA-4	Elementary Map and Aerial Photograph Reading
EA-6	Squad Tactics
EA-7	Rifle Platoon Tactics
EA-8	Company Tactics
EA-9	Company Drill, Parades, Review and Ceremonies
EA-10	Military Functions in Domestic Disturbances
EA-11	Employment of Land Mines
EA-12	Special Training (Night and Cold Weather)

ENLISTED BASIC EXTENSION COURSE

EB-1	Marine Corps History and Organization
EB-2	Drill for Foot Troops
EB-3	Military Courtesy, Authority, Discipline and Security of Classified Information
EB-4	Personal Hygiene, Venereal Disease, Field Sanitation and First Aid
EB-5	Clothing and Equipment
EA-1	Interior Guard Duty
EB-7	Individual Defense Against ABC Attack
EB-8	Individual Protection
EB-9	US Rifle, Cal .30, M1
EB-11	Browning Automatic Rifle, Cal .30, M1918A2
EB-12	Hand and Rifle Grenades
EB-13	Elementary Map and Aerial Photograph Reading
EB-14	Scouting and Patrolling
EA-6	Squad Tactics
EA-12	Special Training (Night and Cold Weather)

ORIGINS of PACIFIC STRATEGY

By Dr. Louis Morton



The research and writing of this article was performed under a grant from the Social Science Research Council as part of a larger project dealing with national policy and military strategy in the Pacific and Far East.

AMERICA'S EMERGENCE AS A world power at the turn of the 20th Century found military and naval leaders as unprepared as the diplomats to assume their new burdens and responsibilities. This was especially true in the Pacific and Far East where the United States had just carved out a colonial empire stretching across 7,000 miles of ocean from San Francisco to Samoa, Hawaii, Guam and the Philippines. No longer could America remain aloof from the conflicts of Asia. The acquisition of an island empire carried with it responsibilities the nation had never before faced.

For the Army and Navy, the problem presented by these acquisitions was the classic one of defending an overseas possession and supporting political commitments in a far-off part of the world with inadequate forces and limited funds. Related to this strategic problem were the subsidiary but scarcely less important problems of naval bases, fleet strength and disposition, and the role of the two Services in national defense.

The Navy, with its experience of more than a half century in the Pacific, had the answer. Defense of an insular position, it held, rested on sea power; without naval supremacy a land defense, no matter how strong, was doomed to ultimate failure. The United States, the admirals argued, must now convert its island acquisitions into naval bases and build and maintain a fleet strong enough to establish American supremacy in the Pacific while defending the Atlantic approaches to the Western Hemisphere.

The logic of the Navy's position, so persuasively expressed in the widely read works of Capt A. T. Mahan, seemed unassailable. At least there were few who could deny the need for defending America's new possessions, though there was considerable disagreement on how this should be accomplished. But Congress and the country, flushed with victory, granted the funds to initiate naval construction and work on defense fortifications began in the years immediately following the Spanish-American War.

The necessity for providing a defense for the recently won islands raised fundamental questions of military policy. What should be

America's strategy in the event of war in the Far East? Which islands should be converted into major bases and fortified? Should the Army or the Navy be responsible for defense? What should be done to prepare for the possibility of a simultaneous threat in the Atlantic and Pacific, in view of the fact that after 1902 England and Japan were allies? And in the absence of a trans-isthmian canal connecting the two oceans, where should the battle force of the Fleet be based? The Asiatic Squadron was too weak to take on the Japanese Fleet alone. In case of war, the United States might well lose the squadron as well as its possessions and bases in the western Pacific before the battle force in the Atlantic could sail around the tip of South America. Should the battle fleet, therefore, be stationed in the Caribbean area, so vital to the defense of the United States, or in the Pacific, where Japan and the European powers challenged American interests? Or should the Fleet be split?

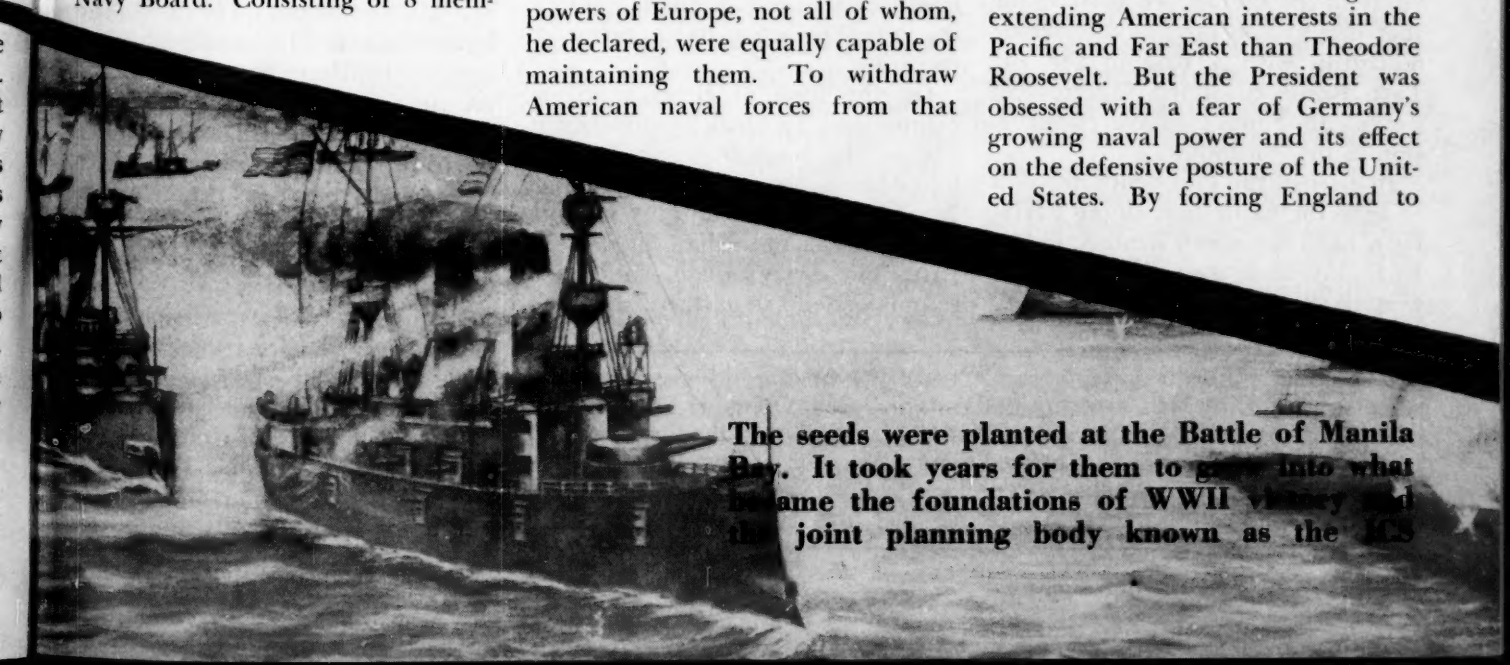
It was inevitable, perhaps, that Army and Navy officers with their different training and outlook should hold conflicting views on these questions and by 1902 the two Services were in open disagreement. Nor was there at the time any single body or group that could resolve these differences. The Navy had its General Board, established in 1900 with Adm George Dewey as its president, to deal with such basic problems as naval strategy and base construction, but the Army had no comparable body until the establishment of the General Staff. That move made possible the creation in the summer of 1903 of the Joint Army-Navy Board. Consisting of 8 members—4 from the Army's General Staff and 4 from the General Board of the Navy—the Joint Board had as its task the discussion of all matters requiring the co-operation of the two Services in an effort to reach agreement on a program acceptable to both. Adm Dewey, the senior member, acted as president while continuing to preside over the General Board of the Navy.

Almost the first matter to come before the Joint Board was the defense of the recently acquired islands in the Pacific and especially of the Philippines. In considering this question the Board had available studies on military policy and strategy prepared at the Naval War College and the writings of Capt Mahan. The United States, Mahan believed, was so situated that its security required control of both the Atlantic and Pacific approaches to the Western Hemisphere. But to maintain a fleet large enough to establish supremacy in both oceans was obviously impossible. Nor did Mahan believe, in the light of the international events, that such a solution was desirable. Who, he asked, could attack across the Atlantic? Discounting the growing naval strength of Germany, he found that only England had the power to threaten the security of the American continent. And since England, in his view, had abandoned the idea, "Who better than she can maintain it?" he asked.

The defense of America's position in the Far East, Mahan believed, presented far more difficulties than the defense of the Western Hemisphere. In the Pacific and in Asia, the United States had "interests and aspirations" in common with the great powers of Europe, not all of whom, he declared, were equally capable of maintaining them. To withdraw American naval forces from that area and send them to the Atlantic would, Mahan asserted, constitute "a declaration of policy and a confession of weakness." Further, such a move would weaken the capacity of the United States to employ its forces offensively and decisively against the exposed and remote interests of a potential enemy. These, Mahan declared, lay not in Europe but in the Pacific and Far East.

Capt Mahan's views found a sympathetic audience in the Joint Board. While admitting that intervention by a strong European power in Latin America constituted the greatest potential threat to American security, the Board believed that this danger was less imminent than a conflict in the Far East. Japan with its rapidly growing navy and restless expansionism represented, in the Board's view, the greatest single threat to American possessions in the Far East and the most powerful challenge to the open door in China. For these reasons the Joint Board recommended that the United States should send its battle fleet to the far Pacific to support American interests in the region and to maintain the balance of power. This fleet, it held, should be stationed in the Philippines, in Subic Bay, and to accommodate it a major naval base should be built there, with the Army providing ground defenses. Failure to act quickly, the Board warned, might lead to "nothing less than disaster."

In this first test of the Joint Board's influence in the councils of national policy, the military advisers failed to win over the President. Few of the nation's leaders were more desirous of maintaining and extending American interests in the Pacific and Far East than Theodore Roosevelt. But the President was obsessed with a fear of Germany's growing naval power and its effect on the defensive posture of the United States. By forcing England to



The seeds were planted at the Battle of Manila Bay. It took years for them to grow into what became the foundations of WWII victory and the joint planning body known as the JCS

concentrate its fleet in home waters, the Germans were placing on the United States the burden of defending the Caribbean area and the projected Panama Canal alone, at a time when the Japanese were apparently making ready to test their new found strength in the Far East.

This much Roosevelt could see, but there was a brighter side to the coin which Roosevelt saw less clearly. The growth of German naval power was, in fact, a guarantee of safety in the Atlantic, for it removed the threat of a British attack from that direction in the event the British acted in concert with their Japanese ally. The possibility of a two-ocean war in the period before the Panama Canal was built was always considered the most serious danger the nation would face. In that event it would be necessary to choose between splitting the Fleet or concentrating all available strength in one ocean—the classic dilemma of the naval strategists.

Though Roosevelt differed with the Joint Board and ruled that the battle force of the Fleet should remain in the Caribbean, he had no intention of surrendering America's position in the Far East. Russia, he believed, would be able to keep Japan in check and thus permit the United States to exercise a strong influence in Far Eastern affairs without the sanction of a strong Pacific fleet. And America's weakness in the Pacific was only a temporary condition, in Roosevelt's view, one that would be overcome when the Panama Canal was completed. Then the battle fleet would be able to make easy transit between the two oceans and add its weight to the force already in the Pacific. To prepare for that day, and to provide the Asiatic Squadron with a base in the Far East, Roosevelt urged Congress to provide the funds for naval construction in the Philippines.

In a sense, the President's decision to keep the battle fleet in the Caribbean fixed American strategy in the Pacific. Without a strong fleet in the western Pacific to contest the challenge of Japan, the burden of defending the Philippines, key to America's position in the Far East, would fall inevitably on the Army. It would be the Army's responsibility to make plans to hold the Islands until such time as the Navy could make the long journey around Cape Horn and westward across the ocean. And many doubted that even if the fleet did reach the area in time it could gain mastery of the western Pacific. But until that issue was decided the Army would have to defend the naval base to accommodate and service the fleet when it arrived. Thus, the defense of the Philippines became the focal point of Pacific strategy and the laboratory for the Army and Navy's first efforts in joint planning.

For the Army, the task of defending an archipelago of 7,100 islands and islets lying in an exposed position off the coast of Asia posed a difficult problem in strategy. It was patently impossible, even with control of the sea, to defend all, or even the major islands in the Philippines. A choice had to be made and it fell on Luzon with its fine harbor at Manila and its transportation system. Asked to comment on the significance of his victory in Manila Bay, Adm Dewey had written in 1898 that "Luzon . . . [is] by far the most valuable island in the group, whether considered from a commercial or military standpoint." At the same time he had recommended that a naval station be established in Subic Bay, which formed the west coast of the Bataan Peninsula and commanded the northern approaches to Manila Bay. The advantages of Subic, in Dewey's opinion, lay in its position athwart the shipping lanes leading into Manila and in its anchorage facilities.

On the basis of Dewey's recommendations, fortified by subsequent studies, the Joint Board in 1903 selected Olongapo at the head of Subic Bay rather than Manila as the site for America's naval base in the Far East. The Army's plans, the Board recommended, should be designed to defend this position, which, when completed, would serve as the home of the Asiastic Squadron and the operating base of the fleet in case of war against Japan.

The War Department supported the Navy's plans for a naval base in Subic Bay without qualifications. "I know of no other military question," wrote the Secretary of the Navy in November 1903, "upon which such unanimity exists." That he did not exaggerate is evident in the unanimous report of the Joint Board the following month. Asserting that the policy of Congress could be assumed to be to hold the Philippines against any foreign army, the Board pointed out that though the Islands had been in the possession of the United States for 5 years "not a gun has been mounted nor an earthwork raised to protect any of their harbors." The Army and Navy, it declared, were united in demanding funds for the construction of a defended base; without it, the Asiatic Squadron could not keep open the line of communications to the Philippines. This base, the members of the Board agreed, must be at Subic Bay, the only suitable site for a naval station. To convert Manila Bay into a protected anchorage, held the most informed naval opinion, would require extensive construction that would run into millions of dollars. Furthermore, the fortification of Subic Bay would not only provide protection for the Philippines, but would also contribute materially to the defense of Manila Bay. "The consequence of neglect or delay," warned Adm Dewey, "may be nothing less than national disaster." After that job was done, Hawaii, Guam and Midway would be fortified. The fortification of Hawaii began much earlier. In December 1904, at the urgent representation of the naval commander in the islands, the Joint Board recommended the purchase of 50 acres of land at Pearl Harbor for a naval station, and work on what was to be the great naval base at Pearl began soon after.

Though the Army authorities in Washington accepted this plan, those who would have to execute it in the Phillipines voiced a strong protest. The strongest voice raised against the plan was that of Maj Gen Leonard Wood, commander of the Philippine Division. Writing in the

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summer of 1904 to his wartime friend, President Roosevelt, he argued that the defense of the Islands should be concentrated in Manila Bay to protect the capital and industrial area around Manila. But the President's decision, based on a study by the Navy's General Board, was against Gen Wood who accepted defeat but remained unconvinced.

Japan's victory over Russia in 1905 altered profoundly the strategical position of the United States in the Far East. With Russia's defeat, there was no nation to dispute Japan's naval supremacy in the far Pacific. In President Roosevelt's words, the Philippines had become "our heel of Achilles." No longer could he count on Russia to keep Japan in check; only military force could halt the powerful Japanese surge toward expansion. Lacking such a force, Roosevelt moved to protect American interests in the Far East by political means. In July 1905, therefore, in return for Japan's assurance that it had no designs against the Philippines, the US recognized Japanese sovereignty over Korea.

But while he sought by diplomatic means to restore the balance of power in the Far East and to prevent further Japanese expansion on the Asiatic mainland, Roosevelt continued his efforts to build up American military and naval strength in the area and to push for construction of a naval base in the Philippines. "If we are not prepared to build and maintain a good-sized navy . . . ," he wrote to Taft in May 1905, "and if we are not prepared to establish a strong and suitable base for our Navy in the Philippines, then we had far better give up the Philippine Islands entirely . . . ."

In the absence of military sanctions, American attempts to settle the increasing differences with Japan were largely unavailing. By 1907, when the San Francisco School Board issued its segregation order, tension between the two countries had reached the breaking point. Political conditions had so changed, wrote the General Board in March of that year, as to make war with Japan "not improbable." In these circumstances the Joint Board recommended that the Subic Bay base should be developed immediately and its defenses strengthened so that it could hold out for the required 90

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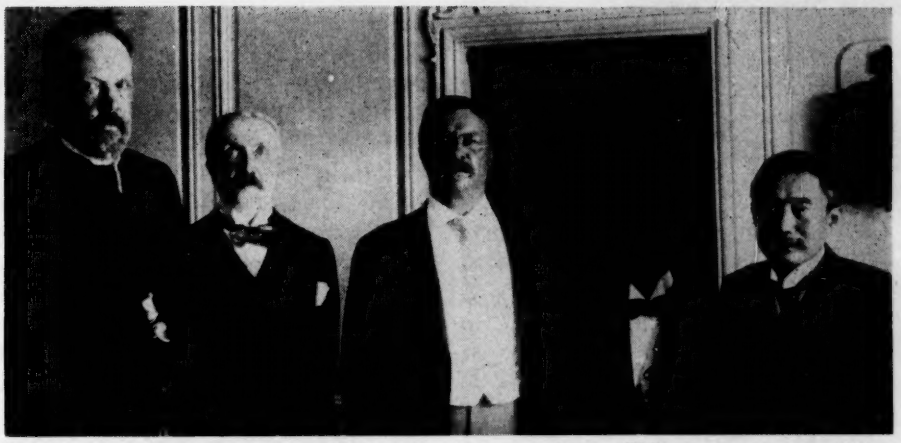

Treaty of Portsmouth — Japan's victory alters US strategic position

days it would take the battle fleet to sail into the Pacific.

As the crisis with Japan reached the proportions of a war scare in the summer of 1907, President Roosevelt, not unaware of the divergent views of the Army and Navy, asked the Assistant Secretary of War what plans had been made by the Joint Board "in case of trouble arising between the United States and Japan." As a result, the Board reviewed its strategy for the Pacific area, producing the fullest statement yet made of the strategic considerations that would guide joint operations in a war with Japan. At the outset of such a war, the Board recognized that Japan would hold the preponderance of naval and military power in the Pacific Ocean. The United States, therefore, would have to remain on the defensive until such time as the battle fleet in the Atlantic could be assembled and dispatched with reinforcements for the Philippine garrison. Only when this fleet and its train reached its destination would America's land and naval forces be able to pass to the offensive, the former to defeat any enemy ground forces that had come ashore on Luzon, the latter to establish naval supremacy in the western Pacific.

In June 1907, when the Joint Board made its study, forces in the Philippines were divided between Olongapo, the Navy's choice for a base, and Manila, favored by the Army. This dispersal the Joint Board thought unsound and recommended that all available Army and Navy resources should be employed in the defense of Subic Bay where the Navy had its facilities. That defense, it was recognized, would fall largely on the Army, for no one expected the weak Asiatic Squadron to contest for naval supremacy in the western Pacific. It would withdraw to the east to join the main body of the fleet, leaving to the Army garrison and smaller craft the task of holding the naval base for its return.

Two weeks after the Board had submitted its recommendations, the President gave his approval at a meeting with the Secretary of the Navy and high-ranking Army and Navy officers at his home in Oyster Bay. "You will see," the Adjutant General told Gen Wood in reporting this decision, "that it is the opinion of the Joint Board that our forces in the Philippine Islands are not sufficiently numerous, or the harbor defense works sufficiently advanced, for the Army to hold Manila against an enterprising enemy . . . ." It was at this meeting also that Roosevelt announced his decision to send the battle fleet to the Pacific on the first leg of a world cruise, partly as a gesture of America's growing naval strength and partly to place the Navy in a better position to counter a Japanese attack.

Though the recommendations of the Joint Board gave the appearance of Service unity, the Army strongly opposed the abandonment of Manila. As a matter of fact, MajGen J. Franklin Bell, the Army Chief of Staff, had not participated in the Board meeting at which these decisions were made and on his return to Washington in July 1907, he registered a vigorous protest with the President. With this objection on record, he proceeded to assemble the Army's case for a defense of Manila. The Army War College was put to work on a study of the Philippine defenses and two officers were dispatched to the Islands to study the terrain and propose sites for the lo-

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MajGen Leonard Wood

cation of defensive positions. When Secretary Taft left for a visit to the Philippines that summer he carried with him a letter from Gen Bell outlining the Army's opposition to the defense of Subic Bay. And to Gen Wood in the Philippines, Bell wrote asking support for the Manila Bay project. But even before these moves could have their effect, President Roosevelt, in October 1907, suspended work on permanent installations at Subic Bay and directed the Joint Board to reconsider the suitability of that bay as site for a naval base, including its "defensibility from attacks both from the sea and land sides." If the Board found the Subic Bay position indefensible "from either side," it was to consider, Roosevelt further directed, whether or not America's naval base in the Philippines should be located "behind the fortifications of Manila Bay."

While the Joint Board was pondering its new assignment, the measures initiated by Gen Bell were beginning to produce results. On 1 November, Gen Wood termed the defense of Subic Bay "entirely impracticable with means on hand or liable to be on hand." All American forces in the Philippines, he asserted, should be concentrated on the defense of Manila Bay, a view diametrically opposed to that of the Joint Board. Moreover, Wood was not alone in his views. They were shared, he asserted, by the "naval and military authorities" in the Philippines and by Secretary Taft who was then in Manila. He could have added the Army War College, for later that month, when the officers at the college completed their study, they came to virtually the same conclusion as Gen Wood.

These conclusions were supported also by the report of the two Army officers sent out from Washington to make a first-hand study on the ground. By the end of November they had completed their survey and submitted their recommendations. These called for the main defenses of the Philippines in and around Manila Bay, with the strongest fortifications on Corregidor and subsidiary positions on the other 3 small islands in the entrance to the bay. The defenses of Subic Bay were to be limited to Grande Island from where any attempt by an enemy to establish a base there could be denied. "We are a unit," wrote the two officers, "in recommending against putting any heavy permanent guns or mortars on the main shore of Subic Bay."

On the basis of this detailed report, Gen Wood presented, first to the President on 1 December 1907, and then to the War Department 10 days later, a detailed analysis of the problem of defending the Philippines together with his own recommendations. They differed in no essential respect from those of the surveying officers or of the Army War College: a naval base in Manila Bay, defense of the entrance to the bay by construction of a "first-class fortress on Corregidor," secondary positions on the smaller islands, and strong ground defenses for the capital city itself. But "the really all-essential thing," he wrote, "is a strong Pacific Fleet, based on these Islands, for unless we are superior at sea or are willing to maintain a very large force in the Islands, we must eventually lose them."

The split between the Army and Navy was fundamental. The prestige of the Navy and of its senior officer, Adm Dewey, was at stake. More than anyone else, Dewey had consistently championed the Subic Bay base and won the Secretary and the President to his view. Now, that decision had been challenged so strongly by the Army as to shake the President's faith. More than that, the Joint Board, on 31 January 1908, reversed its earlier recommendations and declared in favor of Manila.

This action by the Joint Board brought from President Roosevelt a rebuke that was as revealing as it was frank. Calling first for "a well thought out plan" for the fortifications that should be placed at Pearl Harbor, Roosevelt told the Board that he wanted them to consider the matter not as an academic exercise but as a practical problem, "due consideration being paid to our probable military and naval resources and policies." That he should have to so address his highest military and naval advisers was surprising enough, but what followed was even more remarkable:

"I call the attention of the Joint Board [wrote the President] to the grave harm done the Army and Navy by such vaccilation and one-sided consideration as has been shown in the treatment . . . of the Philippine problem; that is, of the question as to whether Manila Bay or Subic Bay should be fortified. For a long time I was informed by almost every naval officer and by many Army officers that Subic Bay was the one all-important post to fortify and defend, and that it alone could be made impregnable to attack . . . . I am now informed that the recommendations are all wrong because Subic Bay could not possibly be defended from land attack; and by way of explanation I am further informed that it is not the province of the Navy to advise upon anything but naval matters . . . . Now, I have the very highest regard for officers of the Army and Navy. I think them, on the whole, about the best citizens we have and I want to back them in every way; but they justify the most trenchant critics when they act in such a manner. . . . This year a great many Senators and Congressmen have said to me that they disbelieved in the general staff for either the Army or the Navy because of the curious attitude of the Joint

Board in this Philippine defense matter."

Having thus expressed his dissatisfaction, Roosevelt directed the two Service secretaries to make a full report on the past actions of the Board with regard to the Philippines and to show him all the studies prepared by them on this subject.

The President's request led to a remarkable exchange between the Board and the White House. Though the Navy abandoned its position on Subic Bay it was not willing to admit that it had misled the President. Naval officers explained that the lessons learned from the Japanese capture of the Russian naval stronghold at Port Arthur and the emergence of Japan as the likely enemy were responsible for the shift from Subic to Manila Bay. And they reminded the President that the primary objective of the fleet was to gain command of the sea, not to defend the coast line or protect centers of population. Their recommendations, therefore, had been based on naval considerations, not ground defense. Finally, with regard to the President's request for a report on Pearl Harbor, they, as well as the Army members of the Joint Board, asserted they could make no specific recommendations for defense measures in the Pacific or for the disposition of the fleet until they were given "the facts determining international relations" and told just what policies and interests they would be required to support.

This reply was hardly calculated to please Mr. Roosevelt. Nor did it, in his opinion, meet his request for an explanation of the Subic Bay recommendations or for a study of Pearl Harbor's suitability as a base. He therefore returned the letter with a clear directive to the Joint Board to reply to the questions he had asked. Meeting on 5 March, the officers on the Board agreed to stand by their first reply but amplified their remarks on Pearl Harbor to include a statement that it was essential to fleet operations in the Pacific and for the defense of the West Coast. With this statement the correspondence apparently closed.

Roosevelt's confidence in the Joint Board was badly shaken as a result of this incident and he gave up his attempts to get from it a firm recommendation on the defense needs of the Philippines. A measure of his attitude in his reaction to Gen Bell's request in February 1908 that, in view of the weakness of the West Coast ports and the Pacific garrisons, the Joint Board be asked to study the question of retaining the battle fleet in the Pacific. "I should of course be glad to have the opinion of the Joint Board on this matter," declared Roosevelt, "but I can not say that I will follow that opinion." Not once during the remainder of his tenure of office—from March 1908 to March 1909—did he call upon the Board again for advice.

Though he dispensed with the services of the Joint Board, President Roosevelt continued to push for the construction of a naval base in Hawaii. Even before his disillusionment with the Board, he had urged Congress to appropriate funds for Pearl Harbor, and now he pressed again for congressional action. In May 1908, a million dollars was allocated for the Hawaiian base. And at the end of the year the Secretary of the Navy reported that, on the basis of the Joint Board's recommendations, only minor naval facilities would be constructed in the Philippines. The major fleet base in the Pacific, he announced, would be located at Pearl Harbor. "This definitely disposes of any contention as to the locality for a repair station in the Philippines," he wrote, "and enables us to concentrate efforts on the building up of the naval base at Pearl Harbor." The whole question of the Board's reversal of its own judgment he side-stepped by a vague reference to past differences now resolved.

As a matter of fact, the Army and Navy members of the Board were far from agreement on the problem of a naval base in the Philippines. But since the Board did not meet until President Taft had been in office for almost 4 months, the problem remained in abeyance from March 1908 to July 1909. During this year and a half, the Army proceeded with its plans to fortify Corregidor and Grande Island and to defend Manila. The Navy, for its part, delayed construction of the proposed naval facilities in Manila Bay while pushing construction at Pearl Harbor. Though it had lost the fight over Subic Bay, the Navy did not transfer its facilities from Olongapo until

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Philippines, early 1900s — undefended

1921.

When the Joint Board finally convened at President Taft's bidding in July 1909, the Army and Navy members were apparently still as far apart as before. In response to the President's request for a report on the relative merits of various locations in the Philippines as sites for naval bases, the Board suggested a compromise solution echoing its earlier findings. Instead of the naval base in Manila Bay desired by the Army, the Board referred in general terms to the desirability of preparations to move the facilities at Olongapo to Manila Bay during an emergency. No major base, it declared, should be built west of Pearl Harbor, which, with an advance base at Guam, would together be able to service a fleet large enough to assure American naval supremacy in the western Pacific and provide the Philippines the necessary protection.

Though the Army appreciated the value of naval supremacy, it could hardly defend the Philippines against attack on the promise of reinforcements in the future unless it was given sufficient resources to hold out until the fleet arrived. Joint strategic plans, Army officers contended, should include a clear statement that the Navy would send the battle fleet to the Philippines at the outbreak of war and should stipulate the duration of the defense and the force needed to conduct that defense. "The present policy of the Navy," wrote the Secretary of War, "would result in practical certainty of the capture or destruction of the naval base" before the fleet would arrive.

There was no way out of the strategic dilemma presented by the Philippines. Defense of an insular position against an enemy with a

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Corregidor—chosen by the Army

powerful fleet was dependent upon naval power and the United States had neither the ships to assure naval supremacy in the western Pacific nor the guns and fortifications to make the Islands an impregnable fortress. The only chance for a successful defense lay in the early completion of the Panama Canal and the Pearl Harbor base to assure the timely arrival of the fleet, and a garrison strong enough to keep off the enemy until reinforcements could be brought in. Thus, the mission given the Philippine Division commander in 1911—by which time Gen Wood had become Army Chief of Staff—was "to hold and defend the main defensive works at the entrance of Manila Bay until the arrival of a relieving fleet." But there were still many who believed that the Islands could not be held and that no effort should be made to do so in the event of war with Japan unless a strong fleet could be based there.

Relations with Japan, meanwhile, had not improved. Minor irritations only added to deep differences dividing the two nations and, in the spring of 1913, a crisis as serious as that of 1907 again raised the specter of war in the Pacific. As before, the immediate cause was anti-Japanese sentiment on the West Coast. Coming closely on the heels of American recognition of the new Chinese Republic, this action brought forth a strong protest from Japan. There were those who discounted the possibility of war, but many linked Japan's protest with the fact that the Panama Canal would soon be completed. To prove their point, they cited Japan's attack against Russia with the completion of the Trans-Siberian Railroad. Japan, they argued, would have to launch a sudden, surprise attack against the United States, as it had against Russia in 1904, in order to maintain its supremacy in the Pacific, threatened now by the Panama Canal and the Pearl Harbor base.

President Wilson, who hoped for peace, refused to sanction any move that could be interpreted as a hostile act. Thus, though elaborate preparations were made in the Philippines where artillerymen on Corregidor "slept on their guns for 6 weeks" and though the Hawaiian commander urged completion of the defenses there, little was done to meet a possible Japanese attack. The Chief of Staff was persuaded to authorize the funds requested for Hawaii but it was disapproved by the Secretary of War. And the Secretary of the Navy, Josephus Daniels, similarly declined to accept the recommendations of his senior naval advisers to transfer elements of the fleet from China, Hawaii and Panama to the Philippines. Like the President and Mr. Bryan, the Secretary of State, Daniels was convinced that many of the admirals would welcome war with Japan. Did not the Navy officers know, wondered Bryan, that "if ships were moved about in the Far East it would incite war?" These officers, he declared angrily, "could not be trusted to say what we should or should not do, till we actually got into war."

Not only did the military and civilians disagree on the measures required to meet the crisis, but each disagreed among themselves. Mr. Daniels told the President that the Navy was ill-prepared for war in the Pacific and that if the Japanese attacked they would be able to take not only the Philippines but also Hawaii and Alaska. But the Secretary of War thought otherwise and asserted that if the Navy would send the vessels then in China waters to the Philippines, Manila could be held for a year. It was at this time that young Franklin D. Roosevelt as Assistant Secretary of the Navy became familiar with war plans against Japan and friendly with some of the senior admirals whose views on Pacific strategy may have influenced him later in life. "Some fine day," he wrote in the summer of 1914, "the State Department will want the *moral* backing of a fleet in being and it won't be there."

The conflicting views on the secretarial level were a reflection of the unresolved differences between the Services. In January of 1913, the Army and Navy War Colleges had forehandedly completed an exhaustive review of Pacific strategy. On several matters the Army and Navy planners were in agreement. They agreed, for example, that Japan was the most probable enemy in the Pacific; that in the event of war, the Philippines would be the first objective. Should the Islands be defended? Did national policy require their defense? What other islands would have to be defended? Doubtful of their ability to hold any or all of America's Pacific possessions in case of war and acutely aware of the dichotomy between political commitments in the area and the military forces allocated by Congress, the planners asked for a definition of national policy with regard to the Philippines, Guam and Hawaii. No realistic war plans could be made, they asserted, until that was done.

The Army planners admitted that the ability of the United States to hold the Philippines against attack by Japan was dependent upon the strength of the fleet. They recognized, too, that no ground defense of the Islands could assure their retention unless the Navy could bring to bear forces superior to those of the enemy in the western Pacific. To do that, the Navy would require a base in the Philippines and the Army's first task, therefore, was to defend such a base.

But before the Navy could sail westward it would have to secure its base at Pearl Harbor and its line of communications. Guam, the naval officers argued, was the key point on that line and the base from which the Navy would extend its control over the western Pacific. Its development was therefore of the first importance in any plan for the defense of the Philippines.

The emergence of Guam in the planning studies of 1913 was the result of long agitation by the Navy for an emphasis on the island's role in Pacific strategy. Interest in the island dated from its acquisition in 1898. To many naval officers, Guam held a strategic position second to none. "If we secure or retain a coaling station in the Philippines," wrote

Cdr C. H. Stockton to RAdm Stephen B. Luce in June 1898, "we would have San Francisco or the transisthmiam canal to Honolulu, Honolulu to Guam and Guam to the Philippines, the entire stretch across the Pacific with American stepping stones in the way of coaling stations." But despite this recommendation and others, little was done about Guam during the years that followed.

The world cruise of the fleet in 1908 and the decision to construct the Navy's main Pacific base at Pearl Harbor emphasized strikingly the logistical requirements for naval forces operating in the Far East and focused attention once again on Guam. "The equipping of Oahu and Guam as first-class naval bases," concluded a War College study, "would make the logistics of a fleet operating in the western Pacific simple and easy." Similar studies of the period made the same point and there was increasing sentiment among naval officers, reflected in the press, that Guam should be made the "Gibraltar of the Pacific." As one officer wrote, "it had the supreme virtue of *position* and though small in size and without resources, could be converted into a naval base at minimum cost." With the base at Pearl Harbor, it would constitute, in effect, "an expanded and intelligently elaborated coast defense, which, combined with an adequate fleet to bind them together, would keep the enemy from ever approaching our coast . . . ."

The growing sentiment for Guam had the powerful backing of Capt Mahan. Writing to his friend RAdm R. P. Rogers, President of the Naval War College, Mahan declared that "Guam securely held, with a navy superior to that of Japan, threatens every Japanese interest from Dalny and Korea to Nagasaki and Yokahama." Half-measures, in his view, were worse than none at all, for if Guam fell to the Japanese they, too, would have to fortify the island. Why should the United States do half the job for them? He believed also that Guam, properly defended, would prove a strong offensive position. Assuming a superior American fleet, "it is my opinion," he wrote, "that the Philippines can be more surely maintained by the secure establishment of Guam as an advanced base than by local tenure in the Philippines themselves."

The Army, reconciled to the Navy's refusal to develop its facilities in Manila Bay, had by 1913 accepted this estimate of the importance of Guam. Pearl Harbor would make possible the control of the eastern Pacific and the defense of the West Coast; Guam of the western Pacific and the Philippines. But though it accepted this reasoning the Army insisted that the Philippines must have at least an advance base. With such a base, backed up by Guam and Pearl Harbor, America's position in the Islands would be secure and its frontier would extend to the mainland of Asia.

On the basis of this review by the planners, the Joint Board, in May 1913, submitted its own recommendations. Forces in the Philippines, the Board held, should be strengthened sufficiently to permit the defenders to hold out for 4 months, the time now estimated for the journey by the battle fleet. Once the fleet reached the Philippines, it could base in Manila, behind the protection afforded by Corregidor. At the same time the Joint Board approved the report of the two War Colleges recommending the construction of the Guam base and sent it along with its own recommendations. The two Secretaries and the President gave their approval, and had war come then, these studies and recommendations would have furnished the basic plan.

With this review the Joint Board virtually ceased to exist until its revival after World War I. Since 1907 the influence of the Board had been steadily declining. The stated immediate cause for its second suspension between May and October 1913 —it was scheduled to meet monthly —was the displeasure of President Wilson over the leak to the press of some of the details of its report. This leak had particularly annoyed the President and had increased public apprehension at a time when he was trying to allay the fear of war. Perhaps as important was the fact that the Board had sent its recommendations directly to the President, thereby incurring the hostility of Mr. Daniels who had strong feelings about civilian control in the Navy Department.

Though the Board resumed its meetings in October it was evident that the new Democratic administration did not look with favor on this assembly of high-ranking officers and would not seek its advice. Finally in April 1914 it was suspended again for unexplained reasons, to meet 18 months later. So unimportant had the Board become by this time that it met only twice during the First World War. The War Department did not even make any attempt to fill vacancies on the Board as they occurred during this critical period. To all intents and purposes joint planning had come to an end with the outbreak of war.

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Roosevelt — dispensed with the Joint Board

Despite the decline in its influence and its failure to live up to its early promise, the Joint Board hardly deserves the low estimate it has been generally accorded. In its studies and reports between 1903 and 1913 it laid the basis of a military policy for the Pacific and a strategy for war with Japan which planners of a later period could draw upon. It failed to achieve a genuine co-ordination between the Services and to become an agency truly representative of the nation's armed forces, capable of speaking with authority in the highest councils. But this failure was due as much to the restrictions placed upon its activities and to defects in its organization as to the reluctance of its members to subordinate the interests of their own Services. Without this early experience, the task of the joint planners in the years before WW II would have been far more difficult. It was on this experience that the Joint Chiefs of Staff concept was built. USMC

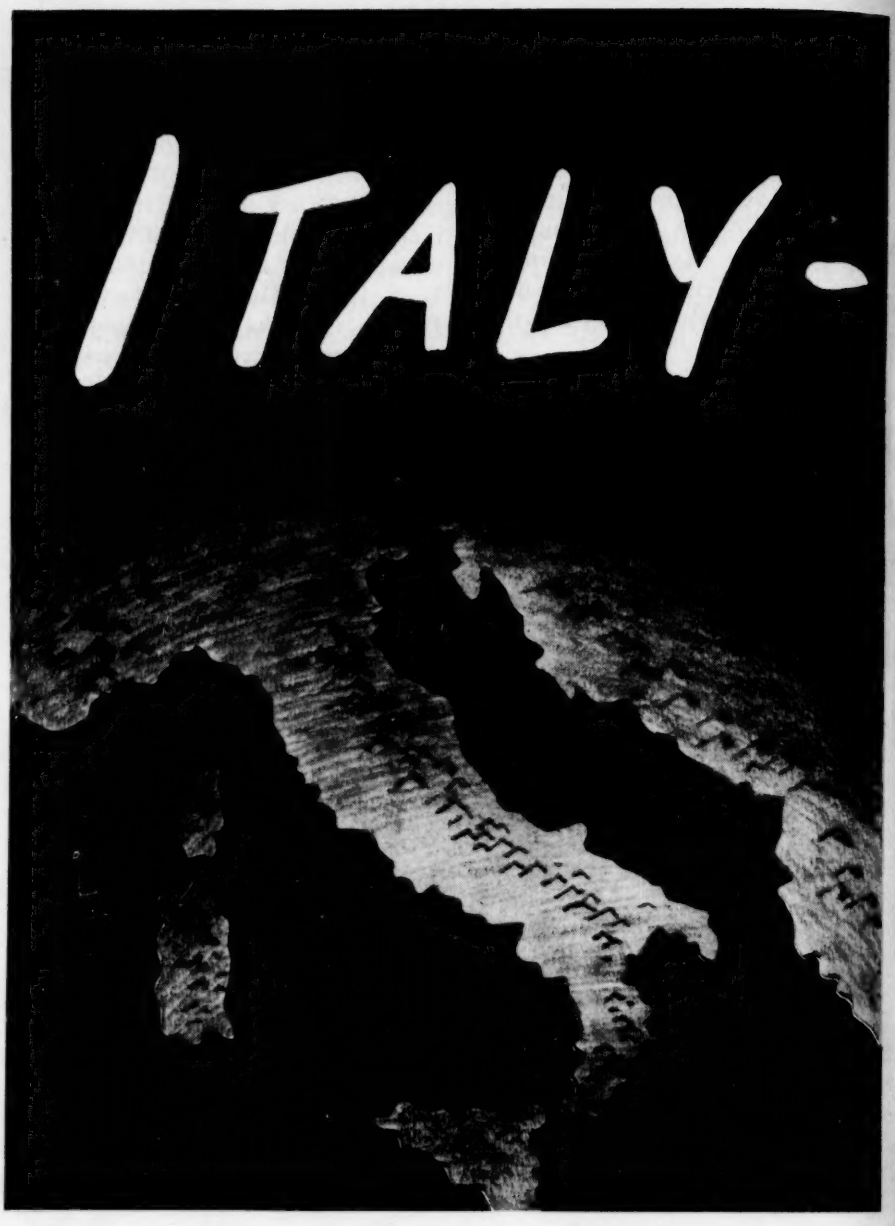
"NOTHING SUCCEEDS LIKE SUCCESS" is a very well-known saying, based on an old French proverb. But it often proves true, in a deeper sense, that "nothing succeeds like failure." Religious and political movements which reigning authority crushed have frequently been revived and come out on top in the long run after their leaders gained the halo of martyrdom. The crucified Christ became more potent than the living one. Conquering generals have been eclipsed by the conquered — that is shown by the immortal fame of Haninibal, Napoleon, and Robert E. Lee. Rommel is the latest example.

In the history of nations the same effect can be seen, though in a subtler way. Everyone knows the saying that in a war "the British only win one battle — the last." It expresses their characteristic tendency to start with disasters but end with victory. The habit is hazardous — and costly. Yet it happens, ironically, that the final outcome can often be traced to the initial way that the early defeats suffered by the British and their allies, by making the enemy overconfident, have led him to overreach himself.

Moreover, even when the scales have turned, a failure to gain immediate success has at times turned out very advantageously by helping towards fuller success and making final success more sure. That happened twice, most strikingly, in the Mediterranean campaigns of the Second World War.

The frustration of the Allies' original advance on Tunis, from Algiers, in November 1942, encouraged Hitler and Mussolini to send a stream of reinforcements there, across the sea, where the Allies were eventually able to trap them 6 months later and bag 250,000 prisoners — thus removing the chief obstacle to the Allies' own cross-sea jump from Africa into Southern Europe.

The second case of a miscarriage turning out well was the invasion of Italy itself. After the swift capture of Sicily and the downfall of Mussolini, the second and shorter jump into Italy had looked like a comparatively easy matter. The prospects were all the brighter because Italy's surrender had been secretly



arranged, unknown to the Germans, and was timed for announcement simultaneously with the main Allied landing. At that moment there were only 6 weak German divisions in the South of Italy, and 3 near Rome, to cope with the double burden of meeting the Allied invasion and at the same time holding down their own ex-allies.

Fieldmarshal Kesselring, however, managed to keep the invaders in check while disarming the Italians, and then brought the Allied armies to a standstill on a line a hundred miles short of Rome. Eight months passed before the Allies succeeded in reaching the Italian capital, and then they were again held up — for a further 8 months — before they could break out of the narrow and mountainous peninsula into the plains of northern Italy.

Yet that long postponement, of the end that had seemed so close in September 1943, carried big compensations for the Allied prospects in general. Hitler had at first intended to extricate his forces from Southern Italy, and establish a mountain blocking-line in the north. But Kesselring's unexpectedly successful defense induced Hitler, contrary to Rommel's advice, to pour resources southward with the aim of holding onto as much of Italy as possible, and for as long as possible. That decision was taken at the expense of the resources which Hitler soon needed to meet the more dangerous menace of the two-sided advance on Germany by the Russians from the East and by the Western Allies from Normandy. Relatively to its own strength, the Allied force in Italy absorbed a higher proportion of the

THE FUMBLED OPPORTUNITY

By Capt B. H. Liddell Hart

Germans' resources than those on other fronts. Moreover, the Italian front was the one where the Germans could afford to yield ground with least risk, while the more they strained their strength to hold an extended front on every side, the more liable they became to a fatal collapse through overstretch. Such reflections helped to console the Allied troops in Italy under Alexander for the prolonged frustration of their own hopes of early victory.

Even so, it should be realized that great expeditions are not launched in the hope of reaching a frustration that may ultimately become profitable. It is not in human nature to desire and seek a failure. So it is worthwhile to explore what happened, and the way it did.

The first important factor in the Allies' frustration was their delay in exploiting the opportunity offered by the anti-war coup d'etat in Italy which overthrew Mussolini. This took place on July 25th, yet more than 6 weeks passed before the Allies moved into Italy. The causes of delay were both military and political. At the conference of the Anglo-American service chiefs in Washington at the end of May, the Americans had opposed the idea of going on from Sicily to Italy, lest such a step might interfere with the plans for invading Normandy and defeating the Japanese in the Pacific. It was not until July 20th, when the Italian forces in Sicily had shown their eagerness to surrender, that the American Chiefs of Staff agreed to a follow-up advance into Italy. But that was too late for making ready an immediate follow-up.

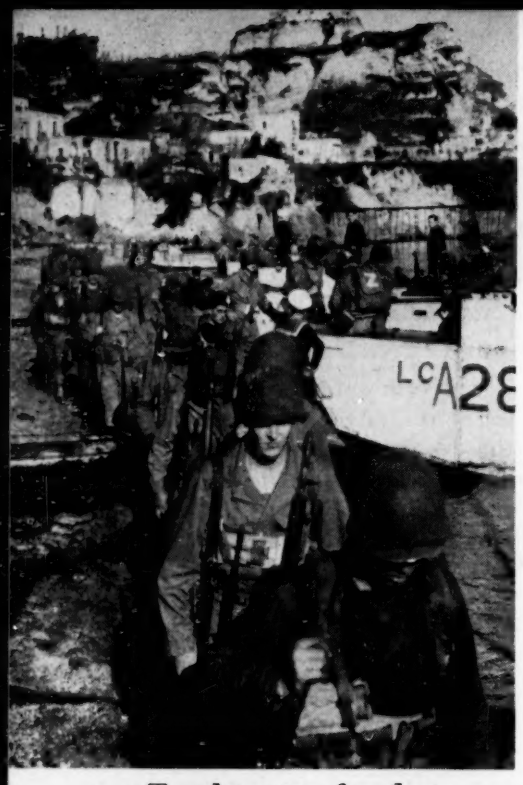
The political demand for "unconditional surrender," formulated by President Roosevelt and Mr. Churchill at the Casablanca Conference in January, was also a hindrance. The new Italian Government under Marshal Badoglio was naturally anxious to see if more favorable conditions could be obtained in negotiation with the Allied governments, but found that it was difficult to get in touch with them. The British and American ministers at the Vatican were an obvious channel, and easily accessible, but proved useless owing to an extraordinary double case of official shortsightedness, as Badoglio's account reveals. "The British Minister informed us that unfortunately his secret code was very old and almost certainly known to the Germans, and that he could not advise us to use it for a secret communication to his government. The American Chargé d'Affaires replied that he had not got a secret code." So the Italians had to wait until in mid-August they found a plausible pretext for sending an envoy on a visit to Portugal, where he could meet British and American representatives. Even then this roundabout way of negotiation entailed further delay in settling the matter.

Hitler, by contrast, had wasted no time in taking steps to counter the likelihood that the new Italian Government would seek peace and abandon the alliance with Germany. On the day of the coup d'etat in Rome, July 25th, Rommel had arrived in Greece to take command there, but just before midnight he received a telephone call telling him that Mussolini had been deposed, and that he was to fly back at once to Hitler's headquarters in the East Prussian forests. Arriving there at noon next day he "received orders to assemble troops in the Alps and prepare a possible entry into Italy."

The entry soon began, in a partially disguised way. Fearing that the Italians might make a sudden move to block the Alpine passes with the help of Allied parachute troops, Rommel gave orders on July 30th for the leading Germans to move across the frontier and occupy the passes. This was done under the excuse of safeguarding the supply routes into Italy against sabotage, or paratroop attack. The Italians protested, and for a moment threatened to resist the passage, but hesitated to open fire and precipitate a conflict with their allies. The German infiltration was then extended on the pretext of relieving the Italians of the burden of defending the northern part of their country so that they could reinforce the south, where it was manifest that the Allies were likely to land at any moment. Strategically, this argument was so reasonable that the Italian chiefs could hardly reject it without showing their own intention to change sides. So by the beginning of September, 8 German divisions under Rommel were established inside Italy's Alpine frontier-wall as a potential support or reinforcement to Kesselring's forces in the south.

Moreover, the 2d Pcht Div, a particularly tough force, was flown from France to Ostia, close to Rome. Gen Student, the commander-in-chief of the German airborne forces, went with it. When I interrogated him after the war, he said: "The Italian High Command was given no previous warning of its arrival, and was told that the division was intended for the reinforcement of Sicily or Calabria. But my instructions, from Hitler, were that I was to keep it near Rome, and also take under my command the 3d Pz Grenadier Div,

Can the failure of the Allied Command to seize the initiative at the critical time be attributed to adhering too closely to orthodox methods?



Too late, too far down

which had moved down there. With these two divisions I was to be ready to disarm the Italian forces around Rome."

The presence of these divisions nullified the Allies' plan to drop one of their own airborne divisions — the 82d (American) under Ridgeway — on Rome itself to support the Italians in holding the capital.

Even so, Student's allotted task looked a very tough one — before the event. Marshal Badoglio had kept 5 Italian divisions concentrated in the Rome area despite the Germans' efforts to persuade him to send some of these divisions to defend the coast in the south. Unless and until they could be disarmed Kesselring would be in the awkward situation of having to face the Anglo-American invading armies with a third hostile army already lying astride his line of supply and retreat.

On 3 September, the invasion was opened by Montgomery's Eighth Army crossing the narrow Straits of Messina, from Sicily, and landing on the toe of Italy. That same day the Italian representatives secretly signed the armistice treaty with the Allies. But it was arranged that the fact should be kept quiet until the Allies made their second and principal landing — which was planned to take place on the shin of Italy, at Salerno, south of Naples.

At midnight on 8 September the Anglo-American Fifth Army under Gen Mark Clark began to disembark in the Gulf of Salerno, a few hours after the Allied radio had broadcast the official announcement of Italy's capitulation. The Italian leaders had not been expecting this announcement to come so soon. Badoglio complained, with some justification, that he was caught unready to co-operate, before his preparations were complete, and Ridgway's intended airborne descent on Rome had to be cancelled.

The Germans were also taken by surprise, but their action in Rome was prompt and decisive, despite the simultaneous emergency in the south produced by the landing at Salerno.

The outcome might well have been different if Italian action had matched Italian acting, which had gone a long way to conceal intentions and lull Kesselring's suspicions during the preceding days. I got a piquant account from Gen Westphal, who was Kesselring's young and very able Chief of Staff. "On September 7th the Italian Minister of Marine, Adm Count de Courten, called on Fieldmarshal Kesselring to inform him that the Italian Fleet would put out on the 8th or 9th from Spezia to seek battle with the British Mediterranean Fleet. The Italian Fleet would conquer or perish, he said, with tears in his eyes. He then described in detail its intended plan of battle."

These solemn assurances made a convincing impression. The next afternoon Westphal and another general, Toussaint, drove to the headquarters of the Italian Army at Monterotondo. "Our reception by Gen Roatta was very cordial. He discussed with me in detail the further joint conduct of operations by the Italian Seventh and German Tenth Armies in Southern Italy. While we were talking a telephone message came through from Col von Waldenburg with the news of the broadcast announcement of the Italian capitulation to the Allies. . . . Gen Roatta assured us that it was merely a bad propaganda maneuver. The joint struggle, he said, would be continued just as had been arranged between us."

Westphal was not altogether convinced by these assurances, and when he got back to his headquarters late in the evening he found that Kesselring had already signalled to all subordinate commands the codeword "Axis" — the prearranged signal which meant that Italy had quit the Axis and that the appropriate action must be taken to disarm the Italians immediately.

The subordinate commands applied a mixture of persuasion and force according to the situation and their own disposition. In the Rome area, where the potential odds against him were heavy, Student used shock tactics. "I made an attempt to seize the Italian General Headquarters by dropping on it from the air. This was only a partial success. While 30 generals and 150 other officers were captured in one part of the headquarters, another part held out. The Chief of the General Staff had got away, following Badoglio and the King, the night before."

This vigorous German reaction to the armistice announcement so shook the Italian commanders that, instead of trying to overcome Student's couple of divisions, they hastened to withdraw out of reach — falling back to Tivoli with their forces, and leaving their capital in the hands of the Germans. That also cleared the way for negotiations, in which Kesselring applied a more gentle form of persuasion, proposing that if the Italian troops laid down their arms they should be allowed to go back to their homes immediately. The offer was contrary to Hitler's order that all Italian soldiers should be made prisoners, but it proved more effective, at less cost of life and time.

The results can be related in Westphal's words: "The situation around Rome calmed down completely when the commander of the Italian forces accepted in its entirety the German capitulation suggestion. This eliminated the danger to the supply of our Tenth Army. . . . It was a further relief to us that Rome no longer needed to become a battlefield. In the capitulation agreement, Fieldmarshal Kesselring undertook to regard Rome as an open city. He undertook that it should be occupied only by police units, two companies in strength, to guard telephone communications, etc. This undertaking was always observed up to the end of the German occupation. Through the capitulation it was now again

possible to resume the wireless signals link with OKW (the German Supreme Command) which had been broken off since the 8th. A further consequence of the bloodless elimination of the Italian forces was the possibility of immediately moving reinforcements by road from the Rome area to the Tenth Army in the South. . . . Thus the situation around Rome, after so many initial worries, had been resolved in a manner which one could hardly hope to better."

Until then, Hitler and his military advisers at OKW had privately regarded Kesselring's army as doomed. Westphal told me of this, adding: "Their opinion was emphasized by the way that supplies and replacements of personnel, arms and equipment were almost completely cut off from us from August onward. All demands were at the time brushed aside by OKW with, 'We'll see later on.' This unusually pessimistic attitude probably also played a part in the employment of Rommel's Army Group B in Upper Italy. It was to take into the Apennine position such parts of our forces as had managed to escape the joint attack of the Allies and the Italians."

"Fieldmarshal Kesselring likewise took a somber view of the situation. But in his view it was still capable of being mastered in certain circumstances — the farther south that the expected large-scale landing took place, the better the chances would be. If the enemy landed by sea and air in the general area of Rome, one could hardly bank on saving the Tenth Army from being cut off. The two divisions we had near Rome were far from sufficient for the double job of eliminating the strong Italian forces and repelling the Allied landing—and in addition keeping open the rear communications of the Tenth Army. As early as September 9th it was becoming unpleasantly apparent that the Italian forces were blocking the road to Naples, and thus the supply of the Tenth Army. The Army could not have held out against this for long. And so the Commander-in-Chief heaved a sigh of relief when no enemy landings took place on the airfields round Rome on the 9th and 10th. On both these days we hourly expected such a landing to be made, with the co-operation of the Italian forces. Such an air landing would undoubtedly have given a great stimulus to the Italian troops and to the civil population that was unfavorably disposed towards us."

Kesselring himself put the matter in a nutshell, saying: "An air landing on Rome and sea landing nearby, instead of at Salerno, would have automatically caused us to evacuate all the southern half of Italy."

Even as it was, the days that followed the Allies' landing at Salerno were a period of intense strain on the Germans, and all the more nerve-wracking through lack of information as to what was happening there. Never was the "fog of war" so thick — that being due to the fact that the Germans were fighting in the country of an ally who had suddenly deserted them. The effect can best be conveyed by again quoting Westphal's account — "The Commander-in-Chief could at first learn very little about the position at Salerno. Telephone communication broke down — as it was on the Italian postal network. It could not be easily restored, as we had not been allowed to examine Italian telephone technique. Wireless communication could not be arranged at first because the signal personnel of the newly-formed Tenth Army headquarters were not familiar with the peculiar atmospheric conditions in the South."

Fortunately for Kesselring's chances the main Allied landing came where he had expected it, and where he could most conveniently concentrate his scanty forces to meet it. The Eighth Army's advance up the toe of Italy also ran according to expectation, and was too remote to carry an immediate danger to him. He benefited much from the Allied commanders' reluctance to venture outside the limits of air cover — and in his calculations was able to reckon on their consistency in observing such conventional limitations. As a result, the Allied landing at Salerno —optimistically styled "Operation Avalanche"—suffered a costly check. Indeed Mark Clark himself speaks of it as "a near disaster." Only by a narrow margin did the landing force hold off the German counterattack and avoid being driven back into the sea.

In some Allied quarters it had been urged that the most effective way to take the Germans off their guard, and throw them off their balance, was to make a landing beyond these limits; and it was argued that a landing on the heel of Italy, in the area of Taranto and Brindisi, would be "the line of least expectation" while entailing little risk — and promising the early possession of two fine ports.

Such a landing was added to the plan at the last moment as a subsidiary move, but the Taranto force consisted only of the British 1st Abn Div, which was hurriedly collected from rest-camps in Tunisia, and rushed across in such naval vessels as were available at short notice. It met no opposition — but arrived without any tanks, and with scarcely any artillery or motor transport. In fact, it lacked the very things it needed to exploit the opportunity it had gained.

In discussion I found that both Kesselring and Westphal considered that the Allies had paid heavy strategic forfeit for their desire to ensure tactical security against air attack, and that this was an over-insurance in view of the then scanty strength of the German air force in southern Italy. They felt, too, that the Allied High Command's habit of limiting the scope of its strokes to the limits of constant air cover had been the defenders' salvation, by simplifying the multiple problems of the defense.

Kesselring remarked: "The Allied plans showed throughout that the Allied High Command's dominating thought was to make sure of success, a thought that led it to use orthodox methods and means. As a result it was almost always possible for me, despite inadequate means of reconnaissance and scanty reports, to foresee the next strategic or tactical move of my opponent — and thus to take the appropriate countermeasures so far as my resources allowed."

As to the course that the Allies should have taken, Westphal made it very clear that: "If the forces employed in the landing at Salerno had been used instead at Civitavecchia (30 miles north of Rome) the results would have been much more decisive. There were only two German divisions in Rome and no others

could have been brought up quickly enough to defend it. In conjunction with the 5 Italian divisions stationed at Rome, a combined sea and air landing would have taken the Italian capital inside of 72 hours. Quite apart from the political repercussions of such a victory this would have resulted in cutting off at one blow the supplies of the 5 German divisions retreating from Calabria. That would have brought all Italy south of the line Rome-Pescara into Allied hands."

Westphal also considered that it was a mistake to land Montgomery's Eighth Army on the toe of Italy, where it had to push up the whole length of the foot, while the greater opportunity on the exposed heel of Italy and along the Adriatic coast went begging. "The landing of the British Eighth Army should have taken place in full strength in the Taranto sector. Indeed, it would have been even better to have carried out the landing in the sector Pescara-Ancona. No resistance to such a landing could have been provided from the Rome sector, owing to our lack of available forces."

Outside Italy itself was the problem of the German detachments that had been sent to Sardinia and Corsica. The Italian surrender had placed them in a very precarious position. Kesselring and Westphal expressed surprise as well as relief at their extrication. "It was completely incomprehensible to us that the withdrawal of the German forces from Sardinia and Corsica could have been carried out with almost no interference by the Allied sea and air striking forces. This enabled over 30,000 soldiers with full equipment to be transferred safely to the mainland." In further comment Westphal said: "It was only too clear to the Commander-in-Chief that a successful execution of the evacuation measures would be very problematical, in face of the enemy's superiority by sea and air. But this counteraction was most surprisingly absent. It only became really threatening when the rear elements of the forces from both islands were assembled in Corsica. The experience gained during the evacuation of Sicily was usefully employed. As already in the case of transportation to Africa, the mass of the personnel was lifted by air." The 90th Pz Grenadier Div reorganized in the Pisa area, and was soon ready for action again. Its return proved of vital importance in the next phase of the campaign on the mainland.

Although the Allied Fifth Army was able to establish itself firmly after landing at Salerno, its subsequent push north towards Rome was slow. Kesselring was able to keep it in check at each stage and finally brought it to a halt on the Garigliano, near Cassino. The late autumn assaults on the Cassino position imposed no very dangerous strain on the defense.

But a crisis developed on the Adriatic side of the Appennines, where the Germans were weakest, on the second day of Montgomery's November attack over the Sangro. The attack was launched in the coastal sector with 3 divisions and an armored brigade, in the first place. Only one German division was available to oppose the attack there, and it was completely pulverized by successive artillery and air bombardments in trying to check the British advance, so that by the end of the second day it was virtually "blown to bits." The path to Ancona and the north now lay open, with no German reserves immediately at hand to fill it. But Montgomery's exploiting action was methodical, like his assault, and Kesselring was able to rush the 26th Pz Div across the peninsula in time to check the British, with the help of the 90th Pz Grenadier Div, which was brought down from Pisa. These gap-filling reinforcements were lucky, too, in suffering no serious interruption from air attack during their hurried march through the mountains.

With the passing of this last opportunity, the Allied armies became stuck for the winter along the river-lines on the east and west of the mountain spine of Italy. Their front was only 70 miles beyond Salerno, after 4 months' effort, and from September onward it had been so gradual that the current term "inching" all too aptly described it. Even when they eventually broke through this winter line, in the following summer, the cramped scope for maneuver in the funnel-like peninsula hindered their progress and helped the enemy to bring each break-through to a halt before it became decisive. It was not until April 1945, when Germany itself was collapsing, that the Allied armies in Italy finally burst out from the "funnel" and were able to overrun the northern plains.

At the time that the Allies landed at Salerno, the most that the Germans had hoped was to delay the Allies' overland advance to Rome and extricate their own forces in the south of Italy, in order to build up a defensive front in the mountain belt spanning the peninsula north of Florence. But when Kesselring managed to curb the Allies' progress, Hitler became inclined to accept Kesselring's arguments for making a prolonged stand south of Rome — since there was no sign of a further amphibious stroke by the Allies, and it was clear that most of their strength was committed to the push up the long and cramped peninsula. The defenders' success in the November battles of Cassino and the Sangro confirmed Kesselring's confidence and sealed Hitler's decision to hold on to central Italy for as long as he could. USMC

★ ★ ★ ★

Milky Way

MY WIFE AND I and our young daughter were staying temporarily at the Camp Lejeune Hostess House after returning from Honolulu in 1948. The dining room didn't open until long after my daughter's feeding time so I approached one of the Stewards Mates in the Officer's Mess with a view towards obtaining a pint of milk a little early. He led me back to the kitchen, opened the reefer and surveyed the cartons of milk stacked therein for a while. Finally, he turned, shook his head mournfully and said, "I'm sorry, Sir, but all we have in there is that homogenized milk and that's kind of powerful stuff for one of them little babies, ain't it?"

Maj. J. R. Kearney

(The GAZETTE will pay $10.00 for each anecdote published. Submissions should be short and pointed.)

Cessna's armored OE-2 protects Marine pilots

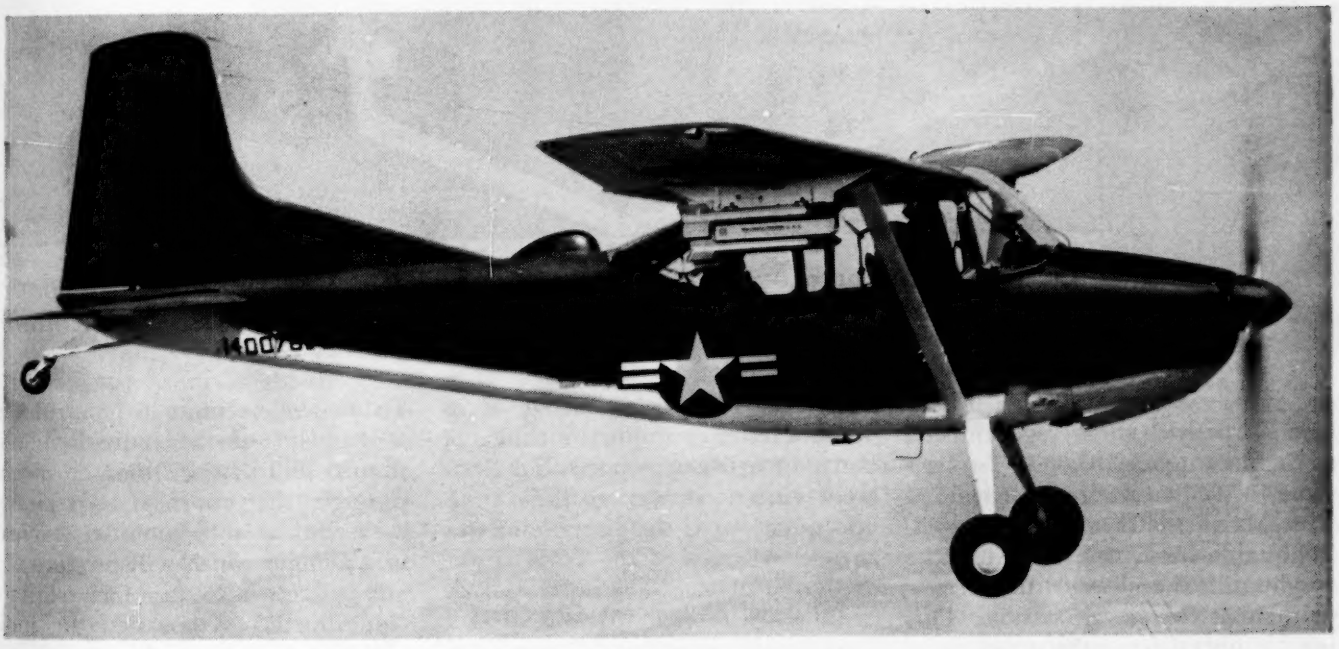
Cessna's reconnaissance-liaison plane—the OE-2—brings greater versatility to Marine Corps air operations, is specifically designed to give the pilot protection in combat.

The rugged plane's 220-m.p.h. dive-speed capability combines with its self-sealing fuel tanks, flak curtain and armored seats to give the Marine pilot maximum protection, get him in and out of targets, fast!

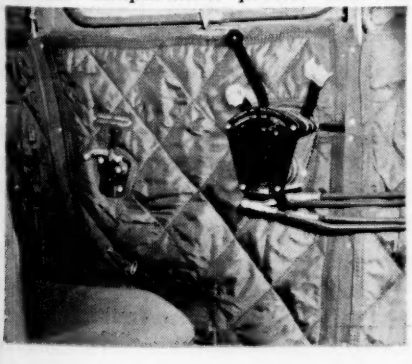
A more powerful version of Cessna's famed L-19, the OE-2 is the first liaison airplane with built-in target-marking capabilities. It also is used as an artillery spotter, to lay communications wire and to drop supplies to troop positions.

The versatile OE-2 meets a specific need, is another example of Cessna's cooperation with the military in planning for today's air age. CESSNA AIRCRAFT CO., WICHITA, KAN.

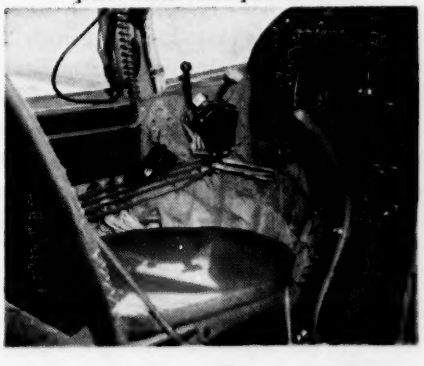
Cessna



Thick, nylon flak curtain and armor plate in rear compartment protect observer.



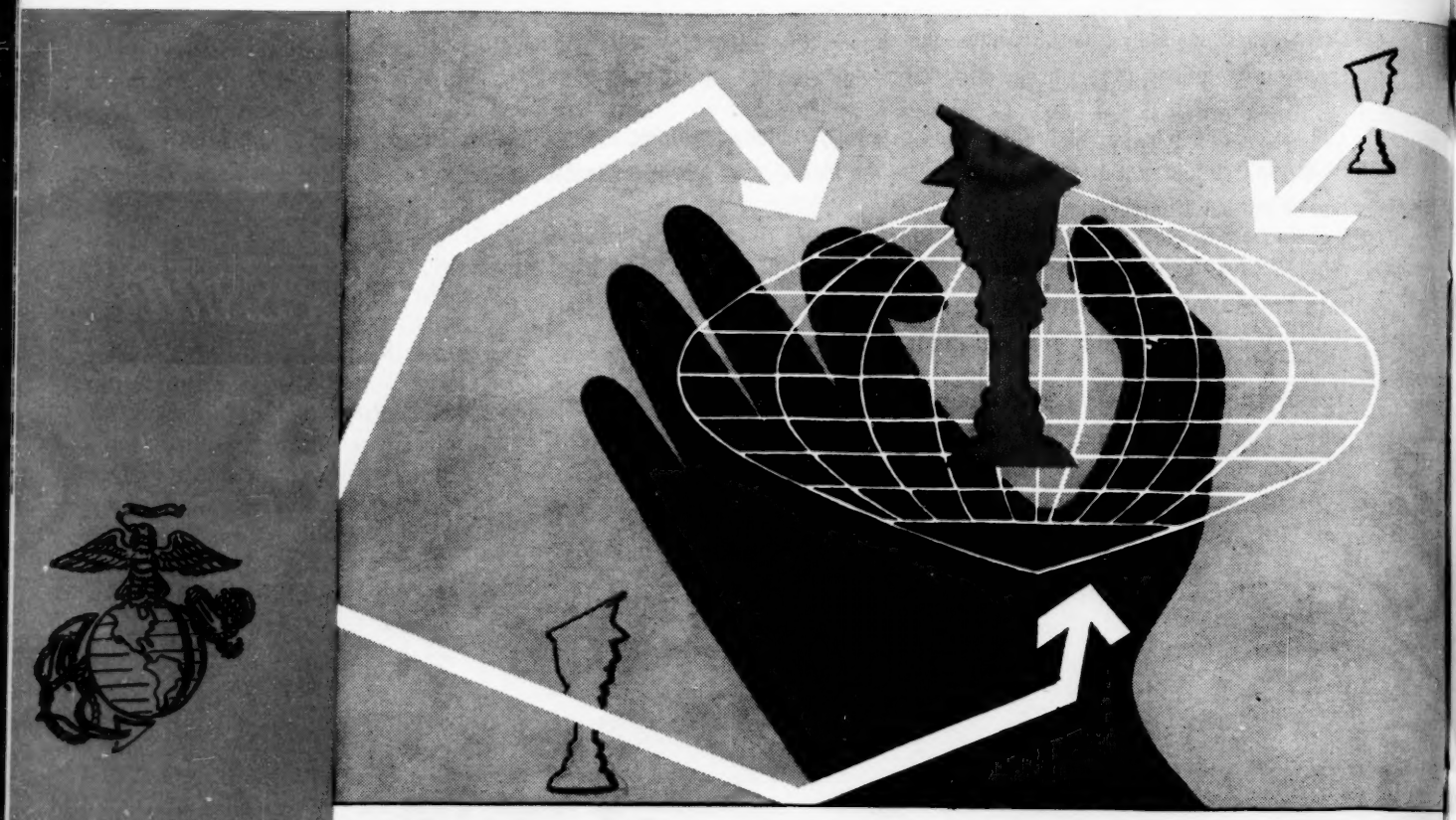
Flak curtain and armor plate afford pilot maximum protection.



Three-quarter inch armor plate fits under pilot and observer seats.

Be a Marine pilot. Inquire today about the future the Marine Corps offers at your nearest Marine Recruiting Office.

ENLISTED



Each time he is ordered to *Right Shoulder, Seabag!* the trooper ponders the why and wherefore of his move. Here is the background

THIS PAST FISCAL YEAR THE Marine Corps had an average enlisted strength of about 187,000. To keep some 147,000 authorized billets filled with Marines of reasonably matching qualifications necessitated in the neighborhood of 149,000 transfers—permanent changes of station. This is a big operation — the travel alone costing over 21 million dollars and resulting in nearly a billion lost man hours.

Is it all necessary? Cannot something be done to stop the high rate of turnover—to provide some unit integrity? These are questions which immediately come to mind when one stops to ponder the extremely high personnel mobility of a military organization. In addition there are the personal aspects to this problem. The individual Marine asks: how did I happen to draw this assignment? How long before I can expect a transfer? What am I due for next? Does it do any good to write a letter or indicate a choice of duty on a fitness report? To draw some current answers to these timeless questions is the purpose of this article.

Personnel Assignment Objectives

Is it all necessary? Contrary to what you might expect to hear from the Marine who claims he has never been in one place long enough to unpack his seabag, there is a military necessity behind each transfer—a necessity which stems from a set of well conceived personnel assignment objectives, fourfold in purpose, designed to permit the Marine Corps to operate at optimum efficiency.

First, there is the fundamental objective of providing the using units with Marines of prescribed qualifications. Next, the recognized requirement to induce the maximum practical stability of assignment. Third, the necessity to control the assignments of the individual Marine so as to insure that he moves through the appropriate training cycle and is subsequently assigned in a manner which will produce the greatest return to the Marine Corps. And fourth, so to assign the individual as to provide him an opportunity to further his professional development and, at the same time, present an assignment pattern which will portray favorably the advantages of a career in the Marine Corps. Obviously, these objectives are closely interrelated, and from them stem the current enlisted assignment policies and procedures.

Influencing the capability of the Marine Corps to satisfy these objectives are 3 mutually dependent factors: 1) the availability of enlisted Marines, 2) the period of obligated service and 3) the funds appropriated for travel. Of the 3, expiration

DETAIL

By LtCol C. B. Drake

of obligated active service has the strongest effect on the level of individual professional attainment and on unit readiness.

Personnel Availability

A term used in connection with the assignment of enlisted Marines to the operating forces is "Personnel Availability." It is more or less a unit of measure to describe to what degree the Marine Corps can keep all units at authorized strength. Expressed mathematically, it is the ratio of the number of Marines actually available to fill billets to the total number of billets authorized and, obviously, this cannot be a purely quantitative expression – we also must take into account the qualitative connotations. For example, even though we have on our rolls Marines well in excess of the 147,000 T/O billets, for a combination of reasons we may be able to fill only 132,000 billets which means that the Marine Corps is at 90 per cent availability. Not only that, but in some areas we might be (and usually are) extremely short of Marines who possess certain required skills or qualifications, and thus in these areas the qualitative availability would be considerably lower than the overall 90 per cent.

Through expiration of obligated active service and other causes, the Marine Corps annually loses thousands of trained Marines, and to offset these losses requires the recruiting, training and distribution of similar numbers. For the past fiscal year 54,653 new recruits had to be obtained to offset losses. If we do not recruit the required numbers, if our re-enlistment rate is lower than anticipated, or if our losses are heavier than expected, then the availability drops.

The example cited above is one in which there was a comparatively high personnel turnover, which in turn created periods of low availability. Even if we are successful in recruiting the number of Marines needed, because of the excessively large numbers who are in training, the number of Marines available for assignment to the operating forces is reduced substantially–availability is down. This factor, coupled with the overseas replacement - rotation pipeline, periodically results in units not only being below T/O strength, but below established manning levels as well.

Personnel Stability

Of concern to all of us is the problem of personnel stability–the length of time a Marine remains in one organization. If we have good stability, we have good unit personnel integrity and a high state of combat readiness. In many ways personnel stability is influenced by the same factors which affect availability. In fact these two conditions are in a direct relationship with each other. However, it is important to note that they will not always vary in direct proportion. That is to say, during a year of relatively good overall personnel availability, the situation and requirements within the Marine Corps may be such as to produce no appreciable improvement in stability. To illustrate, recruits make up a large portion of each overseas replacement battalion, and in a year of low turnover there are fewer recruits to assign which means greater demands on the US-based units to provide replacements. This was particularly significant in fiscal year 1955, a year of relatively good availability, but the demand to provide replacements for 2 divisions and a wing plus in the Far East had a marked adverse effect on stability.

The Effect of the Period of Obligated Active Service

Aside from radical changes in the authorized strength of the Marine Corps, the most telling factor affecting both personnel availability and stability is the term of obligated active service. Except in combat, a unit loses enlisted Marines through discharge and transfer, and the frequency of these losses will vary directly with the average length of time an individual is obligated to serve. In a democracy such as ours, considering the social mores and economic influences which control the attitudes of the youth of our country toward peace time military service, we must accept the fact that a sizable segment of the enlisted population of the Marine Corps will be temporary in nature.

Unlike non - military activities which have the capability to recruit required skills and fill vacancies locally, a military service receives replacements through a system the very nature of which breeds instability. It is a never ending process of recruiting raw manpower from the nation at large, transforming this manpower into individuals in accordance with their acquired skills and then, at the end of a stipulated period, returning the majority of them to civilian life.

Obviously, the new recruit is not a suitable replacement for the trained Marine leaving the Service at the expiration of his enlistment. Equally obvious is the fact that to provide sufficient overseas replacements with sufficient obligated service to complete a reasonable tour of duty requires that a sizable number of Marines be so assigned early in their enlistments. Both of the foregoing situations cause a high frequency of transfers with the result of reduced unit personnel integrity. This becomes particularly significant when considering, in light of the 2-year draftee, the mobilization and replacement-rotation conditions which existed during the Korean war.

Another element affecting personnel stability is the cycle of transfers set in motion to fill created vacancies. This is often the subject of criticism, but actually, it goes hand

in glove with our stated objectives. Not only is it an unavoidable product of the system necessary to produce Marines qualified to fill vacancies, but it is essential to the healthy maintenance of the overall efficiency and effectiveness of the Marine Corps. Periods of hazardous duty, overseas duty and other assignments deemed arduous must be equalized. Further, all Marines periodically should receive appropriate assignments which will enhance their combat efficiency and develop their specialized skills.

The Treadmill—What Can Be Done About It?

Admittedly, the net result is the treadmill effect. Influencing the speed of the treadmill are the overall enlisted losses and gains, the requirements for overseas replacements, and the normal patterns of assignment and rotation.

What can be done to slow the treadmill? First, it should be recognized that we do not want to stop the treadmill. A certain amount of turnover is both necessary and desirable. There must be attrition in all grades to prevent stagnation. Without a reasonable amount of turnover there would be no flow of promotions nor would there be the necessary opportunities for Marines to move up the ladder to positions of increased responsibility. In the same sense the Marine Corps has no room for the perennial private, nor for the man who fails to measure up regardless of his grade. Thus, a degree of turnover is essential to the well-being of the Corps. The current problem is not one of maintaining turnover, but rather devising means to slow the treadmill to a reasonable speed.

There is positive action that each of us can take and that is to redouble our efforts to re-enlist qualified Marines and to encourage long term contracts. True, Marines in the grade of sergeant and below can elect to be transferred on re-enlisting and thus tend to increase the speed of the treadmill, but on close examination it should be evident that the long term effect will be increased stability, particularly qualitative stability.

Without going into the question of structure and organization, the most positive control the Marine Corps can exercise is through its personnel assignment and distribution policies—to stabilize tours of duty to the maximum practical extent.

The Organization of Enlisted Detail

In order to achieve a clearer understanding of assignment policies and how they are put into practice it would be well first to look at the organization of Enlisted Detail. The Enlisted Co-ordinator Section is a major element of the Detail Branch, Personnel Department, Headquarters Marine Corps. This section is responsible for the assignment and distribution of all enlisted Marines. It also has responsibilities for policy co-ordination with other agencies within Headquarters on all matters affecting enlisted assignment and distribution. It is an operating agency as opposed to a policy making agency, and is organized functionally in accordance with the major occupational field groupings and specialized tasks. Each subordinate group is further broken down into monitoring sub-units, and it is these "Monitors" who make the bulk of the assignments either by name or by quota.

Each monitoring sub-unit maintains current information as to the authorized and actual strength for each principal activity over which Headquarters Marine Corps exercises personnel assignment jurisdiction. In addition, the Distribution Unit monitors the total Marine Corps by major categories and by occupational fields to insure the proper overall distribution of ranks and skills.

It is important to note that the information as to the actual personnel status in any one command is that provided through the Personnel Accounting System, and its accuracy depends in large measure on the originating activity. If initial entries contain errors, such errors ultimately will be reflected in the monitoring of that particular command.

Based on the current authorized and actual strength, the monitors distribute the Marines in the occupational fields under their control by means of permanent change of station orders.

Recognition of the Individual

The fundamental guiding dictum that shapes all personnel assignment policies is that each enlisted Marine is regarded as an individual—an individual capable of professional growth and who has a positive contribution to offer to the effective functioning of the Marine Corps, regardless of his grade. No two Marines are alike. Each has his own capabilities and limitations; each his own emotions, desires and ambitions; and each has a personal sphere of life. This recognition of the individual is the thread which ties together and gives substance to our assignment policies.

Exigencies of the Service

Underlying each permanent change of station and each duty assignment is a military requirement, so that the Marine Corps can function effectively. Transfers are not made capriciously, but are an essential integer in the military equation which attempts to bring into balance proper personnel distribution and professional development. That is to say, each transfer, whether it affects you as an individual or the unit for which you are responsible, is based on a definite requirement which has as its objective enhancing the professional competence of the individual Marine and at the same time providing an equitable distribution of grades and skills to the using units.

Tour of Duty

Frequently the question is raised as to what constitutes a tour of duty

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at one place or another. Actually, the phrase "tour of duty" is a somewhat nebulous term. Except for established overseas tours and certain fixed or stabilized tours in the United States there just is no such thing as a standard or normal tour of duty.

Current directives prescribe the length of overseas tours, and the tours of certain types of duty within the United States have been established at 3 years. Within the latter category are the Recruiting Service, Inspector-Instructor staffs, Naval ROTC staffs, Headquarters Marine Corps and other independent or specialized assignments.

In addition to the above, it has been determined to be in the best interests of both the Marine Corps and the individual that personnel periodically be reassigned from jobs which are not directly associated with the individual's primary military occupational specialty. For example, it is considered that it is militarily necessary to reassign a tank crewman, say, who has been serving in a guard billet at a Marine Barracks for 2 or 3 years to a billet commensurate with his primary specialty. It should be made clear, however, that except in the case of an established tour, there is no specified period of time on station after which a Marine will be transferred. All such transfers are made to satisfy actual requirements. Furthermore, transfers are not made merely to provide a change in geographic location nor are they made solely in response to an expressed personal preference. A fundamental policy, one which is directed toward improving unit integrity, is to leave the Marine in one organization as long as is practicable.

Career Guidance

One may logically ask at this point: what about career guidance? If there apparently are no fixed standards for rotation between duty assignments, is it not possible for some Marines to fare better than others in regard to qualifying for promotions, serving at choice locations, etc.? The general answer to this question is that our assignment policies and procedures are designed to function in a manner which will insure that the bulk of the enlisted population receives equitable opportunities through timely reassignments.

Within the means available the Marine Corps attempts to afford the Staff NCO the same consideration as the officer receives in regard to career guidance and duty assignments. This means that each Staff NCO is individually monitored, his assignments are controlled by one central agency — he is "detailed" by name. The Marine Corps is the only Service to demonstrate this capability.

While it is not practical to extend this policy below the staff grades, nevertheless, whenever a Marine, regardless of his grade, becomes identified by name, his case is handled on an individual basis. As a matter of policy, however, Marines in the grades of private through sergeant normally are assigned by quota directives in accordance with the prescribed qualifications for the billets in question. Career guidance for this group is initiated through the basic policy that all recruits upon completion of Individual Combat Training are assigned either to a formal school or the Fleet Marine Force. There are exceptions, of course, but these amount to less than 5 per cent of the total recruit output.

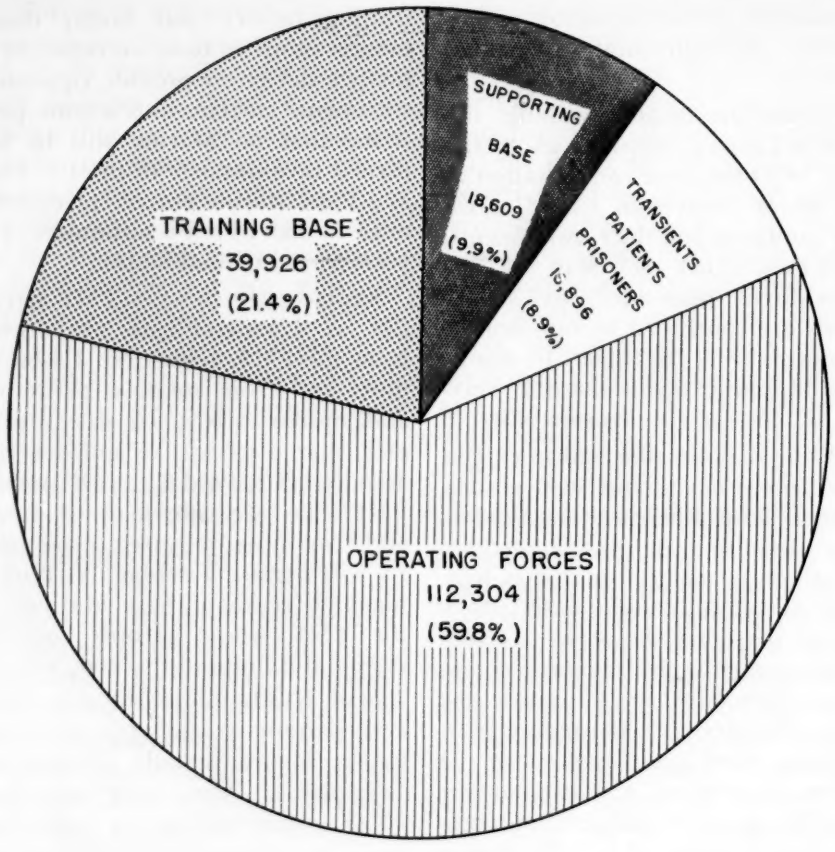
In order to assure that Marines in the sergeant/below group have an opportunity to qualify for advancement subsequent assignments are made in accordance with specific requirements for their grade and military occupational specialty. There are, however, many billets which do not call for a primary MOS such as the guard billets at security activities, military police, drill instructors, special services, recruiters, etc. Here the aim is to assign Marines in the general line category, i.e. infantrymen, artillerymen, etc. and to avoid, insofar as possible, assigning to such duty Marines qualified as mechanics, technicians and other specialists. Further, to assure equitable duty patterns, the Marine Corps Manual directs that when filling quotas, of those Marines qualified, the ones longest on station are the first to be transferred. In overseas assignments priority should be given to volunteers, then those with no prior overseas service (in this group, time on station is the controlling factor), and finally those longest returned from overseas. As a further device to provide equitable treatment, current instructions prescribe that no Marine will be returned involuntarily to the Far East as a Fleet Marine Force replacement until he has served a minimum of 2 years in the United States.

Replacements for non-FMF activities, as a general rule, are drawn from the FMF, both from US-based units and from rotation personnel and, insofar as is practicable, a tour of duty in a security or support-type activity is followed by orders to the FMF. To the extent travel funds and remaining obligated active service will permit, a deliberate effort is made to reassign those Marines to the FMF whose records indicate only a minimum of this type service.

Staff NCOs follow the same general pattern except that they can expect longer periods between reassignments. Also, since each Staff NCO is handled on an individual basis, his assignments are deliberately picked and not left to the chance of a quota directive. Further, since requirements vary by grade and MOS, Staff NCOs in one occupational field will not necessarily follow the same identical pattern as their contemporaries in another occupational field.

How Assignments Are Made

In answer to this question, we can say: to the sergeant and below group, of those qualified you were considered the most eligible; but for the Staff NCO it is a more detailed process. Take, for example, the case of TSgt X, MOS 0369, who has just received orders transferring him from the 1st Mar Div to duty on the staff of the Inspector-Instructor at Lowerbaseplate, Wisconsin as the relief for MSgt Y who is completing 3 years in this assignment. The Infantry Monitor, who has a complete listing of all of his Staff NCOs by current location, will make a preliminary screening to select several initial prospects. He will give first priority to those now in the FMF and will base his initial selections on such factors as time on station, when next due for overseas, availability and current requirements within the parent organization, whether or not a relief is required, etc. Depending



Distribution of the enlisted strength of the Marine Corps

on the number of vacancies for which reliefs are being selected at one time, the monitor picks sufficient names to insure that he will be making a good final selection. The next step is to screen the History Card of each NCO. This card contains a thumb nail sketch of the individual's military record including previous duty assignments, fitness report markings, duty preferences, schools attended, number of dependents, etc. From this screening a certain number will be eliminated for such reasons as poor fitness reports, recently completed a tour of independent duty, or scheduled for some other assignment.

If the monitor has only one vacancy to fill at this time, he may now have narrowed his choice to 5 candidates. His next action is to draw the Enlisted Personnel File of each NCO. No Marine, regardless of grade, is name-assigned by Headquarters Marine Corps without first reviewing the individual's Enlisted Personnel File. This file is the complete military record of the Marine. It contains all old Service Record Books, all fitness reports, a summary of all past service, and copies of all orders and correspondence pertaining to the particular Marine — this includes both favorable matter and any adverse material which may have been referred to Headquarters.

The final selection is based on professional and personal qualifications, past duty pattern, appropriateness of this assignment to the NCO's professional development, preference of duty, and family considerations. For example, between 2 Marines of equal professional and personal qualifications the deciding factor could be any of the following: longest time on station, total time in FMF, or stated preference for duty on an Inspector-Instructor staff.

Staff NCOs are ordered as Far East replacements strictly in accordance with their overseas control date (or date of last return from the Far East) and the requirements for their grade and occupational field. Further, in an effort to equalize such assignments substitution of Marines with older overseas control dates of the same or different grades possessing related skills are made to the maximum extent practicable. In filling overseas billets where dependents are authorized, preference of duty as indicated on the fitness report has a strong influence, and priority is given those whose past duty pattern, e.g. long continuous service in the FMF, warrants special consideration. In this connection the billets for married technical and master sergeants in the State Department program are reserved for those whose service has been restricted largely to the FMF.

In all assignments, from the point of view of the individual, the goal is to develop a well rounded, professionally competent Marine who at the same time receives his fair share of the "good duty" and so called "bad." No doubt we could find a lot of challengers on this point, but that is our aim although often thwarted by the exigencies of the Service.

Preference of Duty

Naturally, if we can assign a Marine to the duty station of his choice, it would appear to be to everybody's advantage. The Marine Corps certainly should be able to expect an enthusiastic performance of duty from a satisfied Marine. For this reason we pay particular attention to the preference of duty indicated on fitness reports. Unfortunately though, in the majority of cases where an individual asks for a particular activity, unless it is a major command, it is seldom that the Marine's availability and a vacancy at the station of his choice will coincide. Within certain limits we are reasonably successful, however, in eventually matching the general type of duty requested if the person is qualified.

The accompanying battery of "pie" charts shows the general allocation of the total authorized enlisted strength. A hasty glance will show that the majority of the enlisted Marines are assigned to the Operating Forces, and within this category the lion's share goes to the Fleet Marine Force. The Training Base is the next largest category and includes, in addition to the recruits and students under training, all billets in the Recruit Depots, Infantry Training Regiments, the Marine Corps Schools, and other organizations whose mission is directly related to training. The Supporting Base includes such activities as the

Marine Corps Bases at Camp Lejeune and Camp Pendleton, the Marine Corps Supply Centers at Albany and Barstow and, of course, Headquarters Marine Corps. Billets with the security forces are located in that small piece of pie in the operating forces. A more careful study will give the general picture of what the chances are of serving in a particular activity.

The question is often asked, does it do any good to write a letter? This is a difficult question to answer — probably the most honest answer is "sometimes yes, sometimes no." Letters are necessary in some programs such as recruiting duty, special foreign duty with the Department of State (for sergeant/below), humanitarian transfers and for certain retraining or reclassification action. Also, it is advisable to request formal school training by letter. Letters requesting duty as a Drill Instructor or other types of assignments which are difficult to satisfy generally will receive favorable action if the Marine is qualified. Requests for return to the Fleet Marine Force or overseas if the person has been on station a reasonable period and has the obligated service to make the transfer worthwhile, usually will pay off. Maybe not immediately, but eventually. In this regard it has already been stated that priority is given those who volunteer as Far East FMF replacements.

Routine requests for reassignment to posts or stations within the United States, however, usually are a wasted effort. It is felt that the quota directive system is the most equitable in the case of sergeants and below and the fitness reports are sufficient for the staff group. In fact, for Staff NCOs the fitness report is the appropriate vehicle to express a preference of duty in all cases except where the program specifically calls for a letter request or for school or retraining assignments.

Regardless of the nature of a Marine's request it is handled on an individual basis, and the decision in each case is carefully conceived. Although the Marine Corps Manual states that letters will not be answered, every letter received in the Detail Branch from an enlisted Marine is answered — either by return correspondence or a set of orders. The Manual, incidentally, is being revised accordingly.

Special Assignments

While it is well recognized that the primary mission of the Marine Corps centers around the Fleet Marine Force and that the Marine achieves his full measure of professional development while serving in the FMF, there are other assignments which demand Marines of very high caliber. In fact, these demands are of such magnitude that they tend to dilute the FMF. They cannot go unsatisfied, and in some instances the quality of the Marine so assigned ultimately will be reflected in the performance of the Fleet Marine Force.

Heading the list of these special assignments is duty as a Drill Instructor. The Commandant of the Marine Corps repeatedly has stressed the importance of this assignment not only to the future growth of the Marine Corps, but to the individual noncommissioned officer as well. It is considered to be one of the most important assignments in an NCO's career.

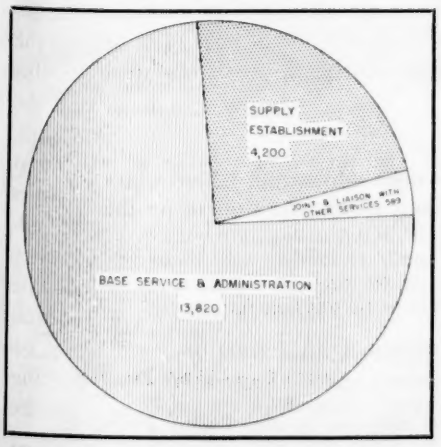
Hand in glove with the Drill Instructors in importance are the Recruiters. This is an assignment of crucial importance to the Marine Corps and one which reflects high credit on the individual NCO who has demonstrated success in this field.

Some noncommissioned officers tend to shy away from these assignments because they will be working out of their occupational field and fear they may hinder their chances for advancement. Not so. The very fact that a noncommissioned officer demonstrates that he can handle an important job not necessarily related to his MOS is a definite indicator to the selection board that here is a Marine who is a cut well above the average.

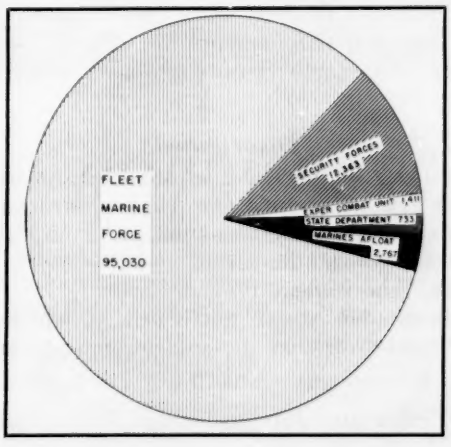
Other assignments which call for Marines of the highest professional and personal qualifications, but which are more directly related to an individual's military specialty are duty on the staff of a Naval ROTC unit, an Inspector-Instructor staff and other instructor billets such as in the Infantry Training Regiments and at the Marine Corps Schools. In addition to the foregoing there are several activities such as special foreign duty with the Department of State and a number of Marine Barracks in very sensitive security areas which require enlisted Marines who must possess high qualifications.

All of this tends to create the impression in the mind of the unit commander in the Fleet Marine Force that all he has to look forward to is the loss of his best Marines. That this is not just an illusion is borne out by the recent demands placed on the FMF for Drill Instruc-

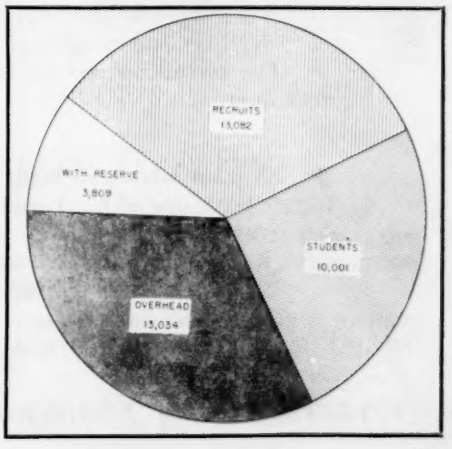
Supporting Base



Operating Forces



Training Base



tors. The importance of these assignments cannot be minimized, nor can we overlook their value to the well being of the Marine Corps. The caliber of the recruit, the quality of his initial training, the state of readiness of the organized reserve, and the type of college man who is influenced to select the Marine Corps through his association with the Marine NROTC instructor — all are directly related to the performance to the FMF in combat. Nor should the unit commander overlook the fact these NCOs are serving on fixed tours upon completion of which a sizable portion of them will be reassigned to the FMF.

The Funds Available

At the outset it was stated that one of the principal factors affecting our ability to achieve our objectives was the availability of travel funds. Congressional interest in this area is keen, and the fact that we must practice economy in the strictest sense is not exactly news. We cannot do all of the things we would like to do nor in the manner we might prefer.

This means that some transfers which are desirable in the military sense, such as transfers to correct grade distribution upon completion of a promotion cycle, simply cannot be made. Each transfer that is made must be fully justified as to its actual necessity, and the rules are getting tighter. For example, the Comptroller General of the United States has ruled that in order for a humanitarian transfer to be made at public expense there must be a concurrent military requirement to justify the transfer as being in the public interest. This has reduced to a marked degree the amount of assistance the Marine Corps is able to render in this area.

In order to achieve the best possible distribution of enlisted Marines within the funds appropriated for travel it is mandatory that each contemplated transfer be weighed from the standpoint of cost, i.e. the distance involved, the number and location of dependents, home of record and place of enlistment, etc. Where possible, vacancies are filled from the same general geographic location, and cross-country transfers are made only when military necessity so requires.

What It All Adds Up To

Whether or not the questions posed at the beginning have been answered satisfactorily is an individual matter, but this is what it adds up to. It should be rather evident that we do not have unlimited resources. Our job, then, is to take the means at hand, recognizing our capabilities and limitations, and match them with our objectives. This is to create as an end product — a true Force-in-Readiness, while at the same time recognizing each individual and guiding his assignments so that he will develop into a well rounded, professionally competent Marine.

US MC

★ ★ ★ ★

Rough, Tough Marines?

OUR WHOLE FAMILY eagerly awaited the coming of *Battle Cry* to our small town theater. Our two little girls, age 7 and 11, were especially anxious, because their big brother had been in it, and had told them to watch for him to come out of the creek, that he was the first one out. He also had told them that there was a lot of fighting in it.

At last the big night arrived! Our family of 2 small girls, 2 bigger boys and Mom and Dad were all there, except our Marine son and brother.

The girls were bubbling with anticipation, because they were going to see a lot of fighting and excitement. They were just at the cowboy and Indian stage.

Love scene, after love scene had flashed by, and still no fighting or excitement, when our oldest girl whispered to her Dad.

"Dad, when is the fighting going to start? All this kissing is killing me."

Mrs. Edith Lang

The New Corps

AT A WEEKLY RESERVE DRILL a veteran Marine Sergeant, was preparing his recruit indoctrination squad for inspection. At the command, "Dress Right, Dress," all heads and eyes turned sharply to the right. All arms were smartly extended so that each man's fingertips brushed the shoulder of the man beside him. One very young Reserve private had his left arm extended, but his fist tightly clenched.

"What's the matter, son, can't you extend your fingertips like everyone else?"

"Yes, Sergeant," said the recruit.

"Well, extend your fingers like you were taught."

The recruit opened his hand and 4 or 5 chunks of warm, sticky chocolate dropped to the drill deck floor.

Capt W. C. Ruthazer

Disoriented

SOME OF ADVANCED flight training in the F9F-2 jet phase consists of a night formation, cross-country flight. With one of his 3 student aviators leading, one "chase" instructor noticed that the student on the left was starting a nose down turn away from the formation.

"Redeye Three, where are you going?" he asked.

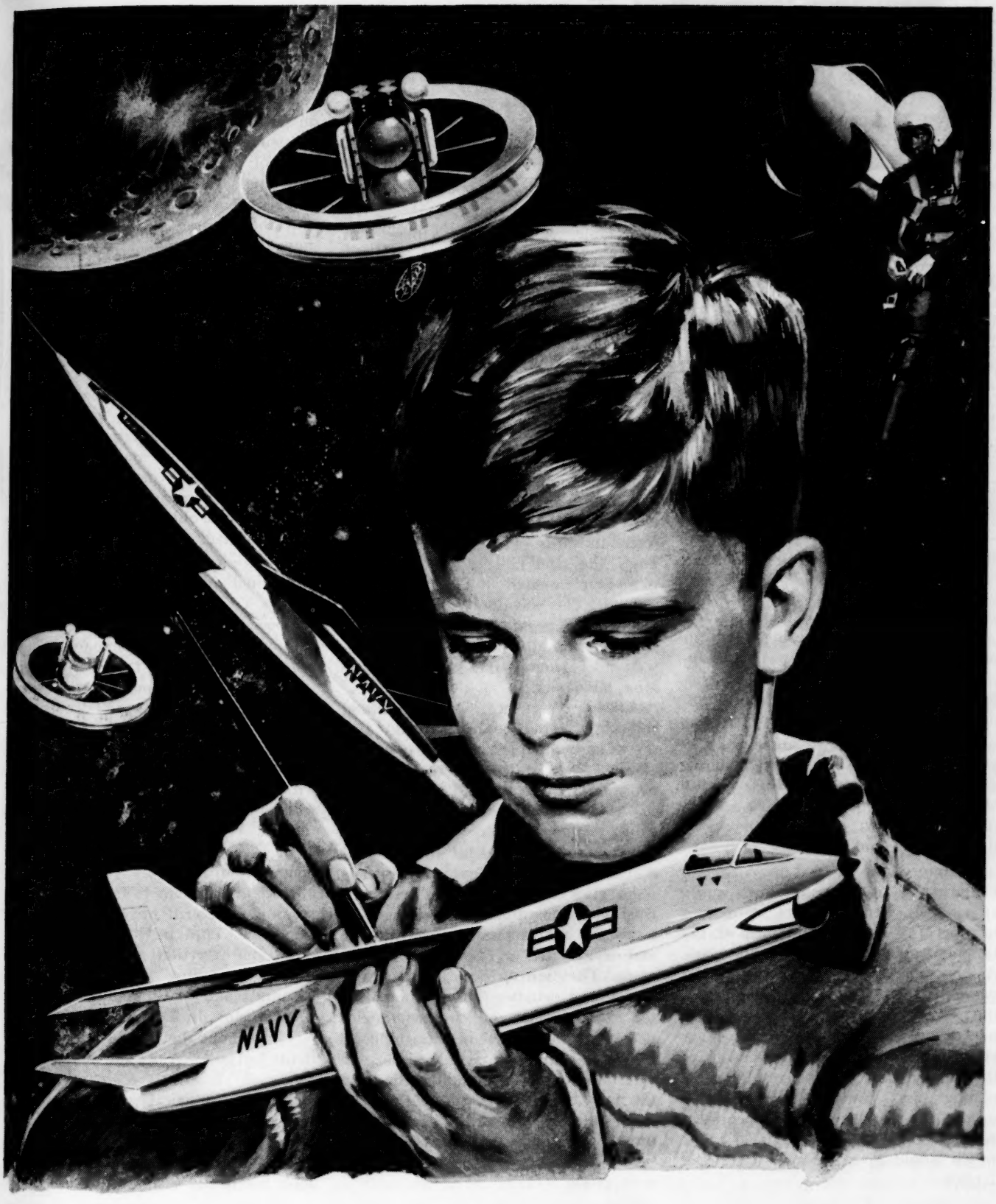
"Sir, I think I've got anoxia," the student replied.

"You don't have *anoxia*, three, what you've got is *vertigo*, join up!"

"Oh, *that's* what it is, Sir," and with that the student immediately rejoined his formation.

Capt R. W. Peard

(The GAZETTE will pay $10.00 for each anecdote published. Submissions should be short and pointed.)



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OBSERVATION POST

BRINGING THE FIELD INTO THE CLASSROOM

USS New Jersey—"Why not try a sand table? In that way we could move the field right into the classroom." The proposal was advanced at the training conference of our shipboard detachment as a possible solution to our instructional problem. We all agreed that the most effective lesson in map reading required a trip to the field with map in hand. But for a Marine Detachment aboard a battleship, such a trip was seldom possible.

I had mentioned to the group that at the officers' Basic School in Quantico, students would actually prepare a complete map of a small area. They learned about scale, contours, declination and conventional signs by using them in making their maps. This was undoubtedly the best solution but it was impractical and most of the time impossible for us.

The first step was to find a map, a portion of which would serve as our study section of terrain. But a study of our available maps revealed no one small area which contained the variations to meet our needs.

Therefore, we decided to create an imaginary piece of terrain which would embody all of the features we desired to teach. A list was compiled of the common topographic features and signs. A clay model 18-inches square was molded so as to include everything on the list. We cast the clay model in plaster and drew contour lines on it. A vertical photograph was then taken of the plaster model. The result was a photographic contour map 9-inches square. The sand table would represent a section of ground 250 yards on a side which would give the map a scale of 1:1,000.

Now we were ready to work on the sand table. A box 8-feet square with 6-inch sideboards was built to rest on the deck. We prepared sufficient cardboard profiles to accurately indicate the relief and place them within the box. Next we filled in around the profiles with damp sand and painted the surface with a 1/8-inch coat of plaster so that the relief would hold its form when the sand became dry.

The sand table was a scale enlargement of the small plaster model from which the map had been prepared. A bar scale was drawn so that all sand table measurements could be read directly in yards. For instructional purposes, the sand table was not referred to as the "model" but rather as the ground. This was done to firmly establish in the mind of the student the scale relationship of man to imaginary section of ground, rather than map to sand table model.

A basic map sheet was reproduced showing the outline of the sand box, several prominent terrain features, two contour lines and a number of critical elevation spots.

We were ready for our first class which dealt with scale. The basic map sheet was distributed to the students and they began the assignment of sketching a map of the sand table "ground." By taking measurements, the men determined the representative fraction and constructed a bar scale on their maps. They measured straight line distances and winding roads, comparing the map and "ground" in each case.

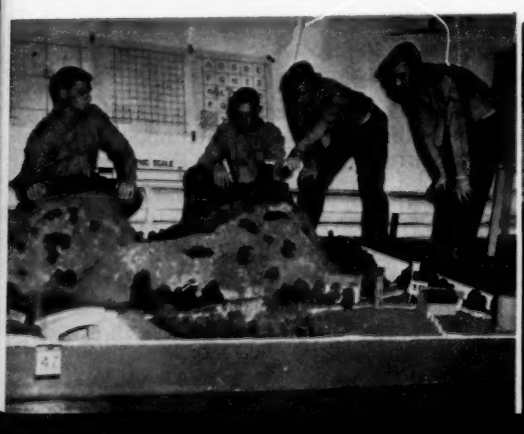
A lesson in grid co-ordinates followed in which the students learned how to determine the co-ordinates of objects on the map which were pointed out to them on the "ground." They were required also to identify features on the "ground" whose map co-ordinates they were given.

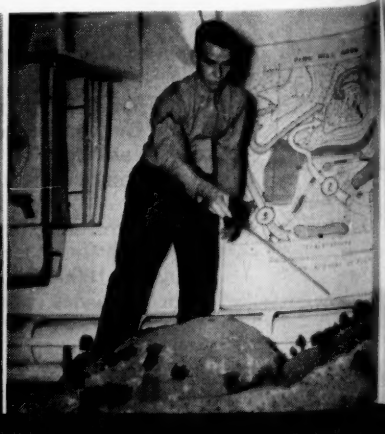
The next class dealt with contours. It was here that the "ground" made its greatest contribution to learning. Spot elevation markers were placed to correspond with those previously indicated on the basic map sheet distributed to the students. The men examined the relief of the terrain and drew the contour lines on their maps. When completed, their maps were superimposed over the solution and the errors were immediately evident. They studied the ground again and then the plaster model with the contour lines indicated on it. The relationship between contours and relief became clear as comparison of the two was made.

Following this, the students received instruction in profiles, declination and conventional signs. The "ground" was landscaped with vegetation and man-made objects. Each man was required to determine the correct conventional sign for the various natural features and man-made objects. He then sketched it on his map in the proper color.

A solution map, printed in color, was distributed and instruction was begun on the co-ordinated use of map and compass. Aboard ship it is not possible to employ an actual compass to read azimuths on the sand table for the relative direction of magnetic north changes with the ship's heading. To overcome this difficulty, a dummy training compass was mounted on the top of a 4-by-4 wooden block. The dial was fixed, with allowance made for declination, while the cover and eyepiece could be rotated. When this was properly placed against the side of the sand box, the magnetic north arrow was oriented. This enabled the student to take an azimuth reading as though he were actually in the field. Thus he learned about intersection, resection and polar co-ordinates by taking readings on the "ground" and plotting the results with a protractor on his map.

Throughout the course, once the students had grasped the instruction using the sand table and their maps, they were given practical problems employing actual maps of various scales. Because they had learned the principles on a simple map, they knew what to look for in the mass of details which





appear on most maps.

The instruction was conducted solely by corporals and privates. The results of the examinations which followed proved the value of the sand table as a teaching aid.

When the idea of the sand table was proposed, it was thought of only as an aid to map reading. It soon became apparent that the "ground" was adapted to instruct in a variety of other subjects. Technique of weapons fire, terrain appreciation and tactics were only a few.

We began to realize the training potential of the sand table. It enables us to reproduce, in miniature, terrain in any part of the world. The scale can be tailored to a rifle squad or a reinforced division as required. The scenery can be used over and over again for different models of the same scale. Thus flexibility is one of the sand table's principal assets.

Construction can be as elaborate as the situation demands and time permits. The materials utilized are inexpensive and readily available. Ours had been carefully planned and landscaped because the subject of map reading had required exactness. Such accuracy would be desired when the sand table is used to supplement a map exercise or serve as a briefing aid for a projected operation.

On the other hand, the sand table can be a very simple affair in which the damp sand is formed into the desired relief to portray a particular situation and then reformed immediately to illustrate another.

In the versatile sand table, we have a training aid which will add realism to classroom instruction and enable the instructor to teach more clearly, in terms of terrain, the factor which often decides the outcome of battle.

Maj L. C. Shepherd, III

WINDAGE RULE

MARKSMANSHIP TRAINING UNIT, San Diego, Calif.—Every man in the Marine Corps has at one time or another come across the windage rule. It goes like this—"Wind in miles per hour times range in hundreds of yards divided by 10 gives the number of clicks for a full value wind." I doubt if any marksmanship training program in the Marine Corps would be complete without at least one hour on this rule. Yet, this rule is worse than useless. I want to show where this rule has failed us and just what can be done to take most of the confusion out of doping the wind.

In the first place, no one ever uses the rule. When was the last time you yourself used this rule? Did you ever use it? If you did, you probably used the wrong windage on your rifle. If we take every part of this rule and carefully analyze it we will see why.

The first part of the rule is wind in miles per hour. How did you arrive at how fast the wind was blowing? If you used the method prescribed in FM 23-5, you used one of two methods. First, you observed the range streamer flying from its staff forming an angle from the vertical. You estimated this angle in degrees and then divided by 4. The result was the approximate speed of the wind in miles per hour. In the second method, you use grass, paper, dust or cotton, hold them at shoulder height, drop what you are holding to test the speed of the wind. Next, you extend your arm and point to the spot on the ground where it landed. Your arm now forms an angle with your body. Estimate this angle in degrees and divide by four. You now have the speed of wind in miles per hour. If anyone ever did use the rule, I doubt if he used the prescribed method to get the speed of the wind, and if he did, I'm sure you will agree that it was nothing more than a rough guess.

The second part of the formula, "Range in hundreds of yards" is of course absolutely correct on the range, and I will grant that the average Marine can estimate the range close enough in combat if he wanted to, and had the time to use the formula.

The third and last part of the formula is again open for discussion. Divide by 10. In the 1935 United States Marine Corps Rifle and Pistol Markmanship Training Manual, this note is made "This rule (windage rule) is for 1906, 150 grain ammunition." If firing M1, 172 grain ammunition make your rule; Range times force of wind divided by 13, which will equal the number of quarter points of windage required. The wind has only about ¾ of the effect on the M1, 172 grain ammunition that it has on the 1906 ammunition. It is quite evident that the constant—10—will not hold true for all these different types of ammo. The shape of the bullet itself has a great deal to do with how well it rides the wind, as does the type of powder used, and even the primer will have some effect on how the powder burns. Since improvements have been made in bullets, powder and primers, it stands to reason bullets made 30 years ago will not have the same characteristics as modern cartridges do. We can reasonably well conclude that the constant—10—used for 1906, 150 grain ammunition cannot possibly hold true for present day ammunition and therefore part three of the windage rule is also rather doubtful.

Estimating the wind in miles per hour is at best a rough guess cluttered up by adding an additional formula or two. The constant—10—could possibly hold true for some types of ammo, but chances are that Marines won't be shooting that type. If two parts of this formula are so dubious, it's a lead pipe cinch Marines have either been using "bum" dope or have been using some other method to get the correct wind. I for one know they have been using some other method.

Just assuming we do away with the windage rule, how can we determine just what windage to put on our rifle? My method is not new. In fact, it's been used a lot longer than the windage rule. Instead of estimating the wind in miles per hour, multiplying by the range in hundred of yards and then dividing by 10 (?) you do exactly as you always do anyway and estimate directly the number of clicks blowing. You will have to admit this is a much simpler method. This method is presently being used by everyone firing with the Marine Corps Rifle Team, and everyone else for that matter, and has been since the first ball was pushed down the muzzle of a musket. Since you have to estimate the speed of the wind anyway, why not do the obvious and estimate it directly to clicks. You might say you are only getting an estimate and I agree, but at least that estimate isn't going into a formula where it will only aggravate the situation a little more.

How can we learn to estimate the wind directly in clicks? As we know, the Marine Corps target bull's-eye at 200 yards is 10 inches in diameter and it will take 3 clicks of wind to move the strike of the bullet out of the black. At 500 yards, the bull's-eye is 20 inches in diameter and it will take at least 2 clicks to move us out of the black. What I'm driving at is this: we can make an error of 2 or 3 clicks and still just nick the black or be mighty close to it on the very first shot. By plotting the weather conditions in our score book from day to day it should be a simple matter to look back through our book and be able to very closely estimate just how many clicks of right or left wind are blowing.

Generally speaking, for weather conditions at most ranges, we normally use one or 2 clicks at 200 yards and then add one click for every 100 yards of range as we move back, assuming, of course, that the wind remains steady. Granted, there are times when the wind will be strong enough to move you off your firing point, but if a man once learns to estimate the wind directly in clicks his first shot will be a lot closer than if he used the formula.

To summarize, in the Marine Corps we haven't a moment to spare and to teach an outdated, obsolete and never-used windage rule is the greatest waste of time imaginable. Since we have to estimate the speed of the wind anyway, why not make it in clicks instead of miles per hour. By getting the dope at 200 yards as accurately as possible and then adding one click for every one hundred yards of range I'm sure we can take some of the confusion out of wind estimation. With this simple and effective method of doping wind we will not only save time when instructing, but we will give the Marine confidence in reading the wind and thereby increase his and the Marine Corps' proficiency not only on the rifle range *but in combat as well.*

Capt H. J. Witkowski

TK-INF TRNG

QUANTICO, VA. — No, it will not withstand the acid test of the newest breed. It can't be lifted by helicopter. But then no presently existing "military hardware" reacts to the acid test of battle with the stunning shock action and devastating mobile fire power inherent in the tank. Nor does any implement of war offer the armored protection against conventional and atomic munitions afforded by the tank.

Without doubt, time will produce a replacement for the tank, but until such time, the tank is a potent, necessary weapon.

Rather than lethargically ignoring the "dying beat" in premature anticipation of the ultimate replacement, we are professionally obliged to remain proficient in the use of the tank as a supporting weapon. This is particularly so in view of armor's apparent increased stature in tactical atomic warfare.

Not all units can boast a high degree of proficiency in combined tank-infantry operations. This situation is directly attributable to a lack of sufficient training.

The foundation of effective employment of tanks as a supporting weapon lies in mutual respect and confidence between armor and infantry at the lowest levels. These benefits accrue from daily integrated training starting on the squad-tank level and progressing through all organizational echelons up to battalion, with particular emphasis on joint company training.

Increased, integrated, tank-infantry training serves several useful purposes: It prepares us for maximum effective use of existing weapons; it permits examination of the value of armor; it will assist in the ultimate advancement of tactics and techniques tailored to fit the atomic battlefields of the future.

In an integrated training program a tank company should support the training mission of one infantry battalion for a period of at least one month.

During the one month period, the tank company trains with each rifle company, exclusively, for an entire training week. Weapons and headquarters companies receive their tank training through attachment to letter companies. The fourth week of the cycle is devoted to joint problems at the tank company-infantry battalion level, emphasizing live firing, where possible.

An attempt should be made to concentrate this training as a "package deal." The entire cycle should be uninterrupted and repeated semi-annually—time and commitments permitting.

Outlined below is a suggested schedule which has been carried out to the mutual benefit of those involved.

The first day of the 5-day company training week began with a spirited lecture by tank personnel. This lecture performs the dual mission of familiarizing the infantryman with the tank organization, while at the same time generating the initial spirit of mutual understanding, co-operation and confidence.

Immediately after the lecture the infantry was broken down into groups and they circulated through a "country fair" type instruction period. At one "booth" a lecture, demonstration and practical application of tank-infantry communications took place. A second "booth" displayed tank armament, while tank personnel described the weapons and the fire control equipment. Another group crawled in and out of a platoon of tanks asking questions and becoming familiar with all aspects of the vehicle. A final group received short, cross-country, buttoned-up rides.

Though it was not possible during the original implementation of this program, a live-firing demonstration would be impressive and highly instructional. Few things are as impressive as the accuracy of tank's 90mm gunfire.

The morning of the second day started with a demonstration of hand and arm signals applicable to tank handling. Following this short but important instruction, there was practice in the proper method of mounting and dismounting the tank, as well as the correct attitudes to assume while externally riding the tank. At this time the infantrymen were instructed in a system of tank target designation. A procedure for recovering and evacuating wounded from the battlefield was also demonstrated on this morning. The remainder of the day was devoted to squad, and individual tank operation.

The third and fourth days were devoted to tank platoon-infantry platoon problems, preceded by a brief lecture on tank-infantry tactics. The platoons stressed problems of attack, defense, roadblock, patrol, ambush and tactical marches. These included night problems.

A day long, company-size problem, involving as many tactical situations as possible, including a night-problem, filled out an informative training week.

When the letter companies have undergone their indoctrination, the full cycle of training may be completed by the tank company and the infantry battalion participating in a 2 or 3-day firing and maneuver exercise. Emphasis during the FEX might be placed on mutual supporting fires, joint defense of strong-points, advance guard, battlefield surveillance and rapid offensive exploitation of atomic fires. A bonus accrues to the infantry battalion staff during this exercise. They gain invaluable experience in planning for the use of, and support for, a tank unit.

During this integrated training the infantry, (and to some extent the tankers), become aware of an alternate communication system which parallels their own and can be used by them in emergencies.

As the infantryman becomes more familiar with his own tank, learning its capabilities and limitations, he loses some of his fear of enemy armor. The vulnerability of armor can best be learned from those most familiar with armored vehicles. On the antitank subject, it should be added that some tank units have obsolescent vehicles available which can be used as moving targets for rocket launchers firing inert practice ammunition.

Close relationship between tank and infantry units will surely and subtley resolve any command relationship problems.

From constant integrated training of tanks and infantry—in frequent conjunction with engineers and artillery—many advantages may be gleaned. We have touched on some; others are not as readily tangible. Troops thoroughly indoctrinated in the use of tanks as a supporting weapon absorb some of the characteristics of armor. They attain added qualities of aggressiveness with their increased potentials of mobility, shock action and accurate long range, devastating, fire power.

Many resulting advantages of increased tank-infantry training can, ultimately, be judged only in offensive combat. But past history testifies to the success of the efficient tank-infantry team. It behooves us to train such a team if we would fulfill our professional obligation to make the most proficient use of all our available weapons.

Maj W. C. Barrett

passing in review

BOOKS OF INTEREST TO OUR READERS

Ivan's Army Analyzed . . .

THE RED ARMY—Edited by B. H. Liddell Hart, 460 pages; index; photos; biographical notes on contributors. Harcourt, Brace and Co., NY. $6.00

To put first things first, *The Red Army* is the story of the birth and growth to its present estate of the world's largest ground force. That Capt B. H. Liddell Hart has successfully accomplished this rather staggering task simply adds lustre to his already enviable reputation as a discerning editor.

Anyone who undertakes to provide a reliable account and a comprehensive picture of the Soviet Army in all its aspects is faced with an almost insurmountable stumbling block right at the outset of the project—information is hard to come by. The USSR has consistently enjoyed a not inconsiderable reputation for secrecy about the various aspects of its military machine. In view of the Russian shyness in this matter, and even more because of the scope and complexity of the subject itself, *The Red Army* is not the product of a single writer's efforts. Rather it is one of those books written by multiple contributions —in this case, 32 different men representing 8 nationalities—each dealing with his own specialty. By hasty count the contributors include: 9 Germans, 7 English, 5 Russians, 5 Americans, 3 French, 1 Pole, 1 Czech and 1 Swiss; if I have lumped a Scotsman in with the English, my apologies to either party who might feel affronted by such cavalier treatment.

While this device of using a posse of experts to produce the text has solved a monumental problem for the editor, it doesn't make it any easier for the reviewer. To surface with an adequate review of *The Red Army* is not something that can be tossed off during a coffee-break. I think that the best approach will be to break the book down into its several parts and try to give an idea of the contents.

The first part of *The Red Army* covers the period from 1918-1945. The Red Army (it was not called "Soviet Army" until after WW II) was born in the midst of the chaotic conditions that followed the overthrow of the Russian Monarchy in November 1917, with Leon Trotsky as the principal architect of this army. The influence of the old Imperial Army was significant in spite of the new regime's efforts to obliterate it. There simply were not enough good officers among the Communists to provide the requisite leadership for the new formations. Thus we learn that throughout the Civil War the great majority of Red Army commanders (four-fifths in 1919, for example) were ex-Czarist officers.

The fact that the Red Army was able to prevail in the Civil War of 1917-1920 was due in part to its own accomplishments, but in even larger measure to the mistakes of the White Army leaders.

In 1920 came the Polish War. This was, in sum, a conflict between two improvised armies—Russian and Polish—operating with small numbers of troops over very wide areas. Both sides passed through alternate phases of excessive self-confidence and despondency. These operations revealed many serious weaknesses, as well as the resilient spirit of the new Red Army.

Following the Polish War and through 1936 the Red Army was engaged without outside interference in developing into a full-fledged military machine. But in 1937 and 1938 came the "Great Purge" with its arrests and executions of hundreds of Army leaders. (By 1937, it might be noted, the majority of all men in the armed forces and the overwhelming majority of officers were Party members. Trotsky's Czarist officers had virtually disappeared.) The madness exemplified by the purge decimated the Red Army command structure and was to have far-reaching consequences a few years later.

While the march into Poland in September 1939 had all the aspects of a tactical walk, it also marked the last easy time the Red Army was to enjoy for 6 years. The initial setbacks in Finland in 1940 and the initial breakdown in the face of the German attack in 1941 must be attributed to the disorganization caused by the purge. The subsequent recovery of the Red Army showed that it contained reserves of military talent capable, given time, of making a highly effective machine. It is a point to remember.

The accounts of the campaigns in WW II are written by a number of German generals (Guderian, Blumentritt, von Manstein) who are most eminently qualified to comment on such adventures. In addition, the editor contributes a chapter on the overall aspects of the Russo-German campaign and a chapter is devoted to the political background of that conflict. With a chapter on Russian forces in the Far East (1922-1955) and a chapter on the Soviet Army's behavior in victory and occupation, Part I closes. In 16 absorbing chapters we have followed the birth, growing pains, and coming-of-age of the Soviet Army.

Part II deals with the Soviet army (as it is now correctly named) in the period 1946-1955, the period that saw it emerge as a well-equipped, well-trained military machine.

Space limitations dictate no more than

NEW BOOKS

The books listed below have been received recently by the GAZETTE *for review. More detailed reviews of many of these books will appear in subsequent issues. These books may be purchased at the* GAZETTE BOOKSHOP *now. Association members who are interested in reviewing books should notify the Editor and Publisher.*

THE LAW OF AWOL—*Alfred Avins. Oceana Publications, NY.* *$4.95*

An analysis of the substantive law of AWOL and related offenses. The elements of AWOL and its relation to other offenses are fully considered, as well as affirmative defenses. The author is an attorney admitted to practice before the Court of Military Appeals.

A MANUAL OF COURTS-MARTIAL PRACTICE AND APPEAL—*Benjamin Feld. Oceana Publications, NY.* *$5.00*

A guide to trial and appellate practice in military law. Covers such topics as pretrial motions, pretrial agreement on sentence with the convening authority, evidence obtained from the accused confessions and judicial admissions declaration of a mistrial and review of sentence at all levels of trial and appeal process. The author is a Commissioner, US Court of Military Appeals.

BROADSIDES & BOARDERS — *Marvin H. Albert. Appleton-Century-Crofts, NY.* *$5.00*

Sailing ship warfare—one of history's shortest and most stirring chapters—is relived in this volume. Although it looms large in the romance of our past, warfare with cannons-under-sails lasted from start to finish less than 300 years. This is the first book to deal solely and extensively with that era.

LEE CHRONICLE—*Cazenove Gardner Lee, Jr. Edited and compiled by Dorothy Mills Parker. New York University Press, NY.* *$6.50*

This book is a series of studies concerning the early generations of the Lees of Vriginia, drawn from articles written by the late Cazenove Gardner Lee, Jr., antiquarian of the family, and published between 1922 and 1939 in the *Magazine of the Society of the Lees of Virginia,* of which he was the editor.

THE ART OF SPYING — *Ronald Seth. Philosophical Library, NY.* *$6.00*

In this book are 5 stories of modern spies, each of which illustrates one aspect of spying. The spies are Alexander Foote, Richard Sorge, Trebitsch-Lincoln, Marie Walters and Christine Granville. Mr. Seth expounds his theme in an introduction, showing that espionage, like love, has many aspects.

Britain's Soldier of Strategy . . .

THE TURN OF THE TIDE—Arthur Bryant. 624 pages, index and maps. Doubleday, Garden City, NY. $6.95

Sir Arthur Bryant is one of England's foremost contemporary historians and writers. In this book he has used the personal diaries and autobiographical notes of Field Marshal Lord Alanbrooke to present a vivid story of Alanbrooke's tremendous influence on WW II from the opening of the war in 1939 to the fall of Italy in 1943. Presumably, this is the first in a two-volume series.

Alanbrooke was Churchill's constant companion and military adviser, Chief of the Imperial General Staff, and Chairman of the Chiefs of Staff Committee during four of the toughest years that nation ever faced.

The German blitz of France in the spring of 1940 found Alanbrooke commanding the British II Corps. The collapse of the Belgians released 17 German divisions which moved to cut off the BEF fighting its way to the sea. It was through Alanbrooke's speed and foresight, according to the author, that, " . . . in bringing it through the closing defile of its enemies was one of the greatest feats of British military history."

After Dunkirk, Alanbrooke was appointed commander of Britain's Home Defenses where he worked furiously at preparing the island for the impending German invasion.

In 1941 Alanbrooke took over the reins of the Army from Sir John Dill who was "superseded." The outlook at this time couldn't have been more grim. A possible invasion from across the channel, increasing troubles in the Middle East, the war going against Britain in the Far East, the Mediterranean closed, the Russians being driven back to the very gates of Moscow were just some of the problems confronting the new Chief of the Imperial General Staff.

At this time, too, began his close association with Churchill who was not only Prime Minister, but Defense Minister as well. The relationship between the two makes some of the most interesting reading in the book.

In March 1942 Alanbrooke became Chairman of Britain's Chiefs of Staff Committee and began to take a large hand in shaping Anglo-American war strategy. As such he accompanied the Prime Minister and presented the British military view at the highest conferences—Moscow, Casablanca, Washington and Quebec. It was Alanbrooke, according to Bryant, who shaped the

While reading the chapter on "Geography and Strategy" I was again reminded of a simple fact. The factors of geography are constant factors, despite quantum advances made in weapons systems. Thus, regardless of the existence or non-existence of thermonuclear weapons, should one be of a mind to take foot in hand and invade Russia, there are certain unyielding facts of geostrategy that must be faced. The converse of the matter is equally a matter of concern to the Russians, should those worthies contemplate an adventure in the West, say, or in the Middle East.

This is a big book and is packed with much information. There is, it is true, a certain unevenness as to pace, quality, and continuity. This is inevitable. Any factual account of the Soviet Army must needs be made up of bits and scraps of pertinent information, to be fitted like the pieces of a jigsaw puzzle into a single framework. Capt Liddell Hart has done a first-rate job in producing *The Red Army.* It gives the most complete answer available in a single volume to anyone who is interested in today's $64,000 question: "What makes Ivan run?"

Reviewed by Col R. McC. Tompkins

ED: *Col Tompkins, formerly Senior Marine Instructor at The Naval War College, is now on the staff of FMFLant.*

entire allied strategy of the war.

In trying to stick to his policy of beating Germany first, Alanbrooke had much difficulty in convincing his Allies on the Combined Chiefs of Staff, especially Ernest J. King. Of the tough minded King, he wrote, "I am afraid that nothing we ever said had much effect in weaning King away from the Pacific. There is where his heart was, and the bulk of his Naval Forces. The European war was just a great nuisance that kept him from waging his Pacific war undisturbed."

His diary impressions of other American leaders during the great struggle are equally interesting. Of Eisenhower when Supreme Commander in North Africa, he said, " . . . it must be remembered that Eisenhower had never even commanded a battalion in action when he found himself commanding a group of Armies in North Africa. No wonder he was at a loss as to what to do, and allowed himself to be absorbed in the political situation at the expense of the tactical. I had little confidence in his having the ability to handle the military situation confronting him, and he caused me great anxiety. . . . He learned a lot during the war, but tactics, strategy and command were never his strong points."

In another place Alanbrooke paid Gen Eisenhower the compliment, "Where he shone was his ability to handle Allied forces, to treat them all with strict impartiality, and to get the very best out of an inter-Allied force."

His impressions of Roosevelt, Hopkins, Marshall, Stillwell and other Americans are all here. He was equally frank with his own contemporaries and there are frank appraisals of Wavell, Gort, Auchinleck, Dill, Mountbatten, and other British leaders of the time. Two British Generals get a high mark in Alanbrooke's diary, Alexander and Montgomery.

Undoubtedly Alanbrooke had a great hand in shaping the Allies defeat of Germany. His impressions of the great and near great of the times is illuminating. His intimate glimpses of Churchill are enlightening and often amusing. His reasons why it took the Allies so long in launching their cross-channel attack also makes convincing reading. His somewhat objective view of American policy and leaders, though at times disturbing, certainly gives you another viewpoint.

However, you can not help wondering as you follow the author's romantic treatment of his subject, didn't Alanbrooke *ever* make a mistake or wasn't he wrong just *once?*

Reviewed by LtCol L. E. Hudgins, Jr.

ED: *The reviewer is presently the Commandant of the Marine Corps' Representative at the Joint Services Amphibious Warfare Center, Poole, Dorset, England.*

Of a Great Captain . . .

ALEXANDER THE GREAT AND HIS TIME—Agnes Savill, 300 pages, index map. Illus., Citadel Press, NY. $5.00

This book, written by Dr. Savill, is an interesting attempt to determine just what sort of a person Alexander was. To say that he has been a controversial figure in history, from the point of view of the psychologist, is to understate the case badly. We have heard him described as a young man of great promise who degenerated rapidly into a broken, roistering tyrant. Again, he has been presented to us a god-like youth, incapable of making a mistake, who was something not far short of utter perfection. It's not unfair to Dr. Savill, I believe, to say that her judgment lies between the two extremes, but approaches the latter more closely. The Alexander she serves up to us possesses all the virtue of man, and only enough suggestion—merely a *soupçon,* as it were — of his more amiable vices to make the dish palatable.

It is not the stereotype which emerges that makes the book interesting and valuable, however. It is the mass of detail which the author has gathered from an inspection of a vast number of sources. (She lists 82 major sources, and internal evidence indicates she has wandered far beyond them.) We learn a great deal about how he went about doing things — his sound practice of immediately making friends with peoples whom he conquered, for example. We get plenty of evidence which points to the fact that, whatever his personal habits may have been, he could demand and receive loyalty on a scale more magnificent than would be seen again until the time of Napoleon.

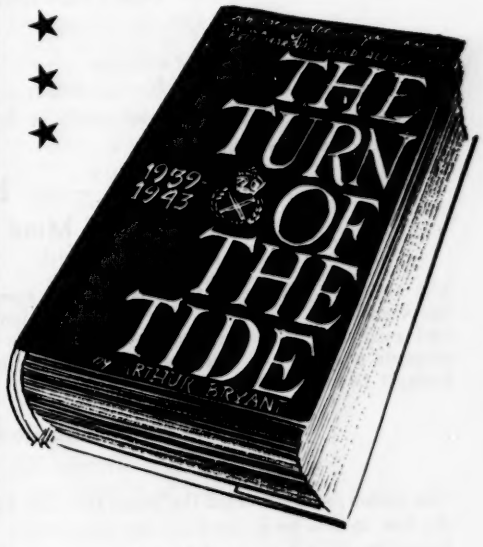
The author, having disposed of Alexander, gives us a quick, gracefully written, and very interesting account of the times in which he lived and of the impact which he made upon history. That impact, of course, was tremendous and lasting. Not only did an incredible amount of real estate change hands, but Hellenic thought and ideas were injected into the circulatory system of the East, and the West itself was enriched by the contact.

Reviewed by LtCol J. L. Zimmerman

ED: *Until his recent and untimely death, LtCol Zimmerman was a member of the Advanced Base Problem team.*

★ THE TURN OF THE TIDE

1939 - 1943



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John W. Masland & Laurence I. Radway

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